Using the Web to Practice and Learn Grammar: ESL Student Perspectives

by Allen Quesada Pacheco

B. A., University of Costa Rica, 1987

M. A., New York University, 1990

M. S., University of Kansas, 1999

Professor in Charge
Paul Markham

Committee Members
Susan Twombly
Phil McKnight
Manuela González-Bueno
Anita Herzfeld

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Dissertation Committee

Dr. Paul Markham, chairperson

Dr. Susan Twombly

Dr. Phil McKnight

Dr. Manuela González-Bueno

Dr. Anita Herzfeld

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ABSTRACT

The purpose of this study was to describe and explain the perspectives of ESL college students on using the Internet resources found in the Web site NetGrammar for grammar practice. In order to understand the participants' perspectives, three main research questions were studied:

1. In what ways do ESL students use the Internet resources found in the Web site NetGrammar for enhancing the learning of English grammatical structures?
2. What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?
3. What are the students' perspectives on the interactive Web exercises for practicing English grammar?

A qualitative method of inquiry was used to explore the potential impacts of the Web resources on a university-level curriculum. Eight participants of eight different countries were chosen to participate in this study. The major method for data collection was standardized open-ended taped interviews. Data was also collected from lab observations and field notes. The qualitative data analysis software Nvivo 1.1 was used to assist data analysis.

Results suggest that most of the participants followed a similar pattern in the mode of use of the Web material. They either practiced directly on the computer and/or printed out the exercises in order to work on them later on. Findings suggest that although students require ongoing Internet training, and technical support Web-based materials use can increase students' self-esteem,

motivation, and can improve their attitude toward the computer and grammar learning. The study participants pinpointed advantages and disadvantages with respect to the use of Web-based materials for learning and practicing grammar.

DEDICATION:

To my fondly remembered grandfather

CALIXTO PACHECO RODRIGUEZ

And

My grandmother

BLANCA RODRIGUEZ CASCANTE

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INTRODUCTION AND PURPOSE OF THE STUDY

Problem

The advent of the Internet has created a whole new world of information access to a seemingly unlimited variety of fields. Among these is the Teaching English to Speakers of Other Languages (TESOL) field, which has found the Internet to be an excellent vehicle for the dissemination of a vast amount of teaching and learning materials related to listening, speaking, writing, and reading (e.g. English as a Second Language Home Page; ESL Teacher Connection, Internet TESL Journal; Impact Online for ESL Students; ESL Virtual Catalog; Dave's ESL Café). ESL teachers are disseminating information about using the Internet not only as a teaching tool, but also as a professional development tool (Hess & Kasikova, 1995; Dudman & Reynolds, 1996; Kitao & Kitao, 1996c).

Intensive English Programs (IEP) are using all kinds of language software programs for students to practice English as a supplement outside the classroom. One of the major problems is that these software packages, in many occasions, do not meet the students' needs due to their level of difficulty and for the most part are very costly. The materials in the software may be too easy or too difficult for the learners. Thus, by using the resources on the Internet, ESL teachers and students can benefit tremendously, especially in countries where English is taught and practiced as a foreign language, and where the language resources are scarce, costly and limited. Materials created and found on the Internet can be adapted to a specific of learners and can be easily updated. Among all of the major issues that

affect the ESL teaching and learning context, there is one of special interest to this study, which deals with the use of computer-mediated communication (CMC) in the ESL grammar classroom. By mounting a Web-based grammar class using the Web site "NetGrammar," ESL students can take advantage of the resources available to them to practice English grammar through a variety of interactive exercises.

Purpose of the Study

The purpose of this study was to describe and explain the perspectives of adult ESL students when using a Web-based support program called NetGrammar as a supplementary tool for an intermediate grammar class at an Intensive English program (IEP) by examining possible obstacles and benefits to implementing Internet-based grammar activities. The main focus of this study dealt with the expectations, beliefs, attitudes, and feelings of students when using the Web site NetGrammar for practicing and learning English grammar as a supplement for a 16- week course.

Research Questions

In order to understand the participants' perspectives, three main research questions were studied:

1. In what ways do ESL students use the Internet resources found in the Web site NetGrammar for enhancing the learning of English grammatical structures?

2. What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?

3. What are the students' perspectives on the interactive Web exercises for practicing English grammar?

Through this study, the researcher hoped to improve his understanding about the various perspectives of the participants when using the Web as supplementary tool for enhancing the learning of English grammar.

Significance and Feasibility of the Study

This study provided teachers and students, at the Intensive English Program (IEP) where it was conducted, a new tool to explore the available grammar resources on the Web, and to explore the benefits and limitations of such an environment via the Web site NetGrammar. The main point in using the Web site NetGrammar was to have a centralized place on the Web with all the links to various grammar web sites so that the participants did not get lost. NetGrammar was the vehicle for accessing the Web resources.

Many ESL teachers have been working hard to disseminate to the ESL community the appropriate information about Internet technology and hypermedia, information connected through links using a variety of media such as text, graphics, audio, etc., as a teaching tool. As Warschauer (1996c) asserts:

> Hypermedia provides a number of advantages for language teaching. First of all, a more authentic learning environment is created, since listening is combined with seeing, just like in the real world. Secondly, skills are easily integrated, since the variety of media make it natural to combine reading, writing, speaking and listening in a single activity (p.5).

The Internet relevance to the Teaching English to Speakers of Other Languages (TESOL) field is augmented not only by the growing availability of computers, but also by many scholars, practitioners, and teachers who are interested in posting and sharing ESL valuable materials such as lesson plans,

quizzes, short stories, listening activities, electronic newspapers, anecdotes, grammar exercises, etc. The Internet also plays a significant role in strengthening communicative competence by providing an inexpensive link to ESL resources found around the world and placing emphasis on authentic communication (Chun, 1994). Therefore, there is a need to understand how the Internet could be used in the ESL classroom and to examine the possible obstacles ESL teachers and students face in using the "cyberspace" medium for teaching and learning languages (Sokolik, 1994). As Harasim (1989) has said:

> on-line education is more than a new delivery mode. It is a new learning domain, which enables us as educators and as learners to engage in learning interactions more easily, more often, and perhaps more effectively, but also to develop qualitatively new and different forms of educational interactions (p. 62).

In short, this new delivery approach-- the Internet-- significantly expands the reach of university courses and enlarges the resources available to students through an "electronic" university.

Definition of Terms

The following glossary explains the computer terminology and other terms that appear throughout this study:

Asynchronous: It describes communication between individuals using email, bulletin boards, web pages or other static textual Internet exchange. Asynchronous messages take anywhere from several minutes to hours to arrive.

Browser: Application software used for browsing through and accessing graphical interactive information on the World Wide Web. e.g. Netscape Navigator, Mosaic.

CALL: Acronym for Computer-Assisted Language Learning.

Computer-mediated communication (CMC): the use of one or more computers to mediate or facilitate communication between two or more people.

Cyberspace: It refers to the collective realms of computer-aided communication.

ESL/EFL: Acronyms for English as a Second language (where English is the official language) /English as a Foreign Language (where English is not the official language but taught widely as a school subject)

E-mail: electronic mail; a way of sending messages asynchronously between two or more people.

Home Page: The startup page of a site, containing identity and index information. It is a hypermedia document on the web.

HTML (HyperText Markup Language): A language in which web pages are formatted and web information is distributed.

Hypermedia: A method of presenting information in discrete units, or nodes, that are connected by links. The information may be presented using a variety of media such as text, graphics, audio, video, animation, image or executable documentation.

Hypertext: Links (URLs) embedded in words or phrases allow the user to select (e.g. mouse click) text and immediately display related information and multimedia material.

The Internet: It is the global network of computers that communicate using a common language. There are over thirty million people that have e-mail access to the Internet.

List-Serv: It is a software program for automating the maintenance and delivery of e-mail discussion lists e.g. TESL-L, NETEACH-L.

Modem (MODulator-DEModulator): A device connects a computer to a telephone line enabling digital data to be transmitted over phone lines.

Multimedia: Computer systems that integrate audio, video and data.

Perspective: It is a combination of beliefs and behaviors, points of views, which serve as a basis for the actions that an individual constructs.

Synchronous: Communication between individuals that occurs in real-time (as in face-to-face conversation).

URL (Uniform Resource Locator): The form of the site address that reveals the name of the server where the site's files are stored, the file's directory path, and its file name.

Usenet (USEer NETwork): Internet newsgroups, which allow the posting and reading of messages on a bulleting board. (e.g., misc.education.language.english)

WWW (World Wide Web or The Web): Hypertext-based system for accessing various resources on the Internet.

Limitations

One of the main limitations of the study was that most of the Web addresses (URLs) were accurate only during the time the study was conducted. This is due to the fact that Web site addresses are subject to change without notice, and sometimes Web sites merge. Besides, this study was limited only to one university-level adult ESL group who was using the Web resources as a supplementary tool for ESL instruction of grammar. Besides, the Web site NetGrammar had not had a pilot study at the time of the study. Another limitation of this study was that the participants were volunteers and that caused problems because three of the eight participants withdrew from the study at the end of the semester. One major limitation of this study was the fact that there was no measure of whether using the Web-based grammar activities improved the participants' English skills.

Assumptions

The assumptions basic to this study required that all participating students possessed basic computer skills and Internet knowledge. All participants had basic skills at using electronic mail and the Web. At the same time, participating individuals were free to withdraw from this project at any time and were willing to take part regardless of a grade as a reward.

Conclusion

By using the resources on the Internet via the Web site NetGrammar students who need extra practice in mastering English structures will have a place open 24 hours a day, seven days a week. ESL teachers can be more flexible in adapting to the various situations in the classroom and can pay closer attention to individual students' problems. However, learning languages with the Internet will definitely present challenges (Warschauer, 1995). Sometimes it will require skills that teachers and students do not have initially. This demands preliminary work by the teachers in determining which tools are available at their institution and are best suited for their purposes. One major advantage is the notion that by creating a public document visible to any number of people across the globe has a very positive effect upon student motivation (Beauvois & Eledge, 1995; Frizler, 1995a; Warschauer, 1996)

This study shed light on important online issues that will guide ESL teachers to better use and integrate this new Internet technology into traditional grammar classes in particular and in all the other language skills in general. In Chapter II, the literature review covers two main areas: computer-mediated communication in the ESL field and the Internet resources potential for language learning. Chapter III describes the methodology to be used, as well as the theory that will support the study. Chapter IV presents the data collected and finally, Chapter V analyzes and shows the major findings and implications of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this section, theories and research studies in the areas of computer-mediated communication will be reviewed as well as technology issues that are of interest to second language educators. Thus, major research and experiences in relation to the use of Internet for language teaching and learning will be discussed. The following issues will be addressed in the review of literature: services of the Internet (the Web, e-mail, newsgroups and discussion lists); the teaching of grammar with CALL in two decades (80's and 90's); teacher development; on-line instruction in higher education; and student empowerment (e.g., self-responsibility for learning, and autonomy). Besides, there is a section on the integration of foreign language teaching standards and the Internet, and the skepticism about Internet Use.

Computer-mediated Communication (CMC)

Much of the previous research and reviews of literature on computer-mediated communication-augmented instruction suggest that its advantages are a result of asynchronous communication, efficient information access, and augmented social distance. Asynchronous communication means that people do not have to be logged onto the computer system at the same time in order to communicate (Harasim 1986; Chan, 1996, Warschauer, 1995). In a way, it frees students and teachers from time and distance limitations. It also allows either reflective or spontaneous interaction. The benefits that emerge from asynchronous communication include a series of issues such as convenience,

more contact among class participants, more control of communication for students, and the necessity and motivation to communicate in writing (Batson & Bass, 1996; Warschauer, 1996).

Computer-mediated communication as a supplement to classroom instruction allows both students and teachers more convenient communication (Phillips & Santoro, 1989; Oliva & Pollastrini, 1995). This convenient way of using time means that students can get questions answered quickly, and that communication can be continuous. As Batson & Bass (1996) have indicated concerning teaching and learning in the computer age:

> The increased involvement of faculty in electronic environment is helping to breach the traditional boundary between scholarship and teaching. Why? Because just as new technologies help make the process of knowledge creation more public, so too they help faculty make their teaching more public. Whether in the case of distance education (through videotape, teleconference, cable television, or the Internet), or in the rapidly practice of mounting course materials on the World Wide Web, teaching materials are becoming ever more public--- and thus open to peer review (p. 47).

Another advantageous factor of computer-mediated communication is the ability to communicate directly with a particular sub-group or audience within a larger class. As Phillips & Santoro (1989) point out, "Instructors can respond to students' particular questions and needs, without taking up class time to work on a problem affecting only one group" (p. 160). In a way, CMC means more interaction and more flexibility in communication among class members, more exchange of ideas, increased participation and variety of interchange.

According to Warschauer et al., (1996d) Batson & Bass (1996), and Alley (1996) computer-mediated communication (CMC) turns more of the control of the instructional communication over to students. Students can read or print online materials that they feel they need, instead of having to wait until class to get materials. As Garrison and Baynton (1987) have demonstrated, having class materials on the mainframe encourages student initiative and responsibility. With online handouts, students must be responsible for getting their own materials, instead of waiting passively for the instructor to hand them out.

Other benefits of asynchronous communication deal with the need to communicate in writing (Warschauer, 1996a). The limitation to written communication encourages a clearer and more organized articulation of ideas, which fosters critical thinking habits. For example, since the students cannot express their emotions through facial expressions, they are forced to express them in writing. Thus, a student using computer-mediated communication must make ideas, questions, direction of thought, and so forth, completely explicit. The time for reflection (Warschauer, 1996a; Mason, 1988) allows the slow thinker or shy person the opportunity to interact, just as much as the quicker or bolder person, at their own pace.

Much of the previous research by Hernandez, Mockus, Granes, Charum, & Castro (1987) has shown that,

> The responsibility involved in writing is... much more serious than that involved in the spoken word. What is heard from the living voice can be modified by passing from one hearer to the other, be adapted to situations, be forgotten. The written word remains (p. 68).

As Phillips & Santoro (1989) found in their study, "students could ask questions without publicly embarrassing themselves. They could argue and disagree without involving excessive emotions or personalities" (pp. 159-60). Thus, shy students are at less of a disadvantage for they have opportunities to enter discussions, which would intimidate them, had they conducted face-to-face interaction (Harman, et al., 1991; Mabrito, 1992; Warschauer, 1996a). Warschauer (1996a) found that electronic discussion creates opportunities for equal chances in the classroom without disadvantaging more verbal students. The students used language, which was lexically and syntactically more formal and complex in electronic discussion than it was in face-to-face discussion.

In another study, Warschauer (1996) found that CMC increased students' motivation for learning. That is, the students had a positive attitude toward using computers (see, also Beauvois & Eledge, 1995). Warschauer (1996) observed that a factor analysis revealed that the factors, which influenced student's positive attitude toward computers, included such propositions as perceived benefits of communication, feeling of personal empowerment, and perceived enhancement of learning opportunities. In the information age, it is important that teachers who are fortunate to have computer labs help gain knowledge in computer skills by giving them ample opportunities to communicate via computers and by integrating computer activities into the regular structure and goals of the course.

On-line Resources

The Internet. The Internet has gained widespread use in all professional and commercial fields, organizations (public and private), and even the political arena (e.g., U.S. political campaign of 1996) in the last years. Recently, it is

becoming a "household word" (Fidelman, 1996). In fact, it is on the Internet that people are finding valuable instructional resources of all kinds such as electronic books; electronic libraries; show biz, sports, magazines and journals; video-clips, and newspapers (Armstrong & Yetter-Vassot, 1994; Kitao & Kitao, 1996a, 1996b, 1996c, 1996d; McVicker, 1995; White, 1994;). Heimans (1995) states:

> I wish to propose that the use of the WWW as a resource has the potential to engender learning, which is active, constructive and collaborative. Active learning involves "mindful processing of information" and responsibility on the learner's part for the results of that learning. Constructive learning allows an accommodation of new ideas into prior knowledge, in order to make meaning or reconcile discrepancy, curiosity or puzzlement. Collaborative learning sees communities of learners exploiting, modeling and observing the contribution of other learners (p. 3).

It is a fact that there is valuable information as well as misinformation or materials with little value on the Internet (Loong et al., 1996) since it is an "unfiltered medium." But it all depends on who is reading what and on the means used to value and judge the quality of the information found on the Internet. As Brunner (1995) explains, "The greatest challenge, for kids and teachers, has to do with the undigested nature of the information that they've suddenly encountered on the Net. Kids have never before been exposed to information in such a variety" (p.1). This cautious step about electronic information leads us to consider the means to measure the reliability of that information. Brunner (1995) suggests checking out the source of the information and the links provided by the author(s) by emailing them with questions to gauge the reliability of the information.

Little has been done, unfortunately, to establish conventions that would identify the quality of material on the Internet (Brunner, 1995). There is no doubt that with the increasing use of electronic communication, users of all walks of life will meet a variety of new forms of texts: e-mail, online chat, newsgroups, Web pages, etc. These constitute for the ESL field a rich, challenging and exciting area for a different form of teaching and learning languages (Cameron, 1994; Daly, 1996; Johnson, 1996; Kitao & Kitao, 1996d; Sperling, 1997; Warschauer, 1995). For this reason, it is the responsibility of language teachers to be trained and well-equipped to work effectively hand in hand with students in this new and exciting digital environment. It is an environment, which will enhance teachers' development, and profession as well as the students' performance (Bass & Batson, 1996).

Web-based grammar activities. An important aspect of ESL sites is the fact that most of them provide the user with valuable links to other sites of interest to language teachers. Most of them will have a section for teachers and another for students. The section for teachers includes aspects such as software publishers, journals, ESL schools, discussion lists, and linguistics. Whereas the section for students will include topics such as grammar exercises, vocabulary games, quizzes, readings, listening, and email projects.

One of the best sites developed for ESL students is the one created by Dave Sperling. There are thousands of interactive exercises that deal with listening, writing, reading and speaking skills, and sections where students can pose questions and an ESL teacher will respond to them. There are specific sites designed for each skill. Grammar Help provides students with suggestions and examples of problematic grammatical structures for ESL learners. Another ESL

site that contains useful grammar exercises is The Internet TESL Journal (http://www.aitech.ac.jp/~iteslj/) which includes not only exercises but also articles, research papers, lesson plans, and teaching ideas). One site that is an outstanding resource for students and teachers is Online English grammar (http://www.edunet.com/english/clinic-h.html). One can find the explanation of grammatical points with contextualized examples as well as interactive exercises. It is worth noting that publishing houses are putting their paper textbooks online. That is the case of the grammar textbook *Grammar Dimensions,* which has its online version at http://gd.heinle.com. It has expanded grammar exercises, tips, including sections such as Netskills tutorials, Talk Center, where students can ask questions to the authors of the textbook.

Web-based support materials. There are many ESL Web activities, which instructional educators have developed, combining the Web with other network tools for language learning (Corio, 1995; Godwin-Jones, 1995; Sterling. 1997). For example, Suzan Moody, at the University of Kansas, developed an ESL Home page that contains Web activities and links about holidays in the U.S.A. ESL sites are especially useful for teachers and students who do not have easy access to cultural printed materials about the target language. The ultimate example is Web site "Adventure Game Project" (HUTLAG) at Helsinki University (Vilmi & Malmi, 1996). Three major types of techniques are used: fill-in-the-blanks, multiple choice and glossary tests, where students can create their own language games and obstacles. One of the advantages of the Web (Warschauer, 1995) is that it "has full graphical interface. That is, you can not only read text, but also see photos, listen to sounds (including songs), and even view a full-motion video directly on the

screen" (pp. 82-83). Developers of language learning Web activities should make every attempt to elicit feedback (Bowers, 1995) with several alternatives to the home page activity format including book reviews, food reviews, how-to- pages, fairy tales, local folklore, recipes, serialized stories, superstitions, TV reviews, want ads, movies critiques, and the like. The students would have the opportunity to give feedback via e-mail after reading any of those activities. Kitao (1996e, 1996f) has collected what he called Useful Resources and Learning Material for Students that contain Web-based activities of all kinds such as journals for students (e.g., CyberSchool Magazine); grammar practice (e.g. English as a Second Language Homepage, Online English Grammar); vocabulary and poetry. Most of those sites present excellent ideas for exploiting information and facilitating language learning and instruction. Warschauer (1995) has suggested, "the Web can be used not only to provide interesting reading materials and information resources for your students but also to give them a place and opportunity to publish their own work" (p.86). This is the case with the online magazine EXCHANGE that is dedicated to publishing English writings of non-native speakers of English.

Electronic mail. Probably the most known word and tool of the Internet is electronic mail (e-mail). According to Warschauer (1995) the "e-mail revolution" applies to English language teaching and learning in a few ways. He depicts it with the following real stories:

> In Hungary, students correspond daily on international discussion lists with students from Norway, the U.S., Canada, Korea, Japan, Australia, and Indonesia. They later decide to jointly publish an international student magazine called *Wings....* ESL students in Eugene, Oregon, submit their dialogue journals by e-mail rather than on paper. The students communicate much more naturally and frequently this way, and the teacher can respond much more quickly and easily....A teacher in New York posts a question via e-mail on an English teachers' list, and within 24 hours a half dozen colleagues around the world have e-mailed her concrete suggestions (p.1).

Many teachers are using e-mail as a quicker means to communicate with students not only as an alternative to personal interaction of instructor and students, but also as an extension of traditional classroom instruction (Partee, 1996; Vilmi & Malmi, 1996, Warschauer, 1995). Even though e-mail can definitely make teaching more practical and gratifying, it could also put an extra burden to teachers who would have to read tons of email messages everyday.

Discussion lists. Discussion lists have brought different opportunities and ways of accomplishing educational goals. According to Aghbar (1995) "Student Lists were established to provide a forum for cross-cultural discussion and writing practices for college and university students in English language programs around the world." There are nine major ESL-related student lists, which served as a means of sharing language experiences including INTRO-SL (For New Members), CHAT-SL (Student EFL/ESL General Discussion List -Low level), DISCUSS-SL (General Discussion List -High level), ENGL-SL (On Learning English); EVENT-SL (On Current Events); MOVIE-SL (On the Cinema), MUSIC-SL (On Music), and

SPORT-SL (On Sports). There are important procedures (Robb, 1996) for introducing Lists to students. For instance, the students first subscribe to the main List (e.g. INTRO-SL), which is designed to give first-timers a chance to hone their e-mail skills before joining the other topically-based lists. Once they are there, the students can introduce themselves and reply to the introductory messages of other students around the world. And when they feel ready, they can then join any of the other Lists and participate in the discussions. According to Robb (1996) students Lists were created to help students deal with the type of language used in such lists. He further explains:

> WHY "STUDENT LISTS"? Thousands of lists already exist, many of which are of potential interest to students. These lists, however, are often complex in vocabulary, jargon and slang, and deal with topics at a fairly high technical level. While students might profit from monitoring these lists, most would be hard put to contribute something of value to the other subscribers. With the student lists, the students will be 'in their element' which makes posting less problematic. In addition, these lists provide an opportunity for students to interact with their peers around the world, which makes participation interesting, enjoyable, and motivating (p.1).

Shire (1992) asserts, "Modern foreign language faculty may find lists of use in four main areas: for scholarly research, pre-publication and publication, professional networking and development, and classroom activity" (p.534). The first area deals with current awareness services, sources of highly specialized information, book reviews for professional or classroom use and supplements to library material. The second one, prepublication and publication, sees lists as opportunities to place finished book reviews, or first drafts of articles, and requests

for publications. And the third area deals with Lists as a means for scholars to find and keep in close communication with others, arrange projects, and test and refine ideas. Finally, Lists can be used as sources of bibliography and pedagogical ideas for the teachers and young researchers.

Newsgroups (UseNet). According to Nilsson (1996) and Sperling (1997) Newsgroups are Internet realms dedicated to exchanging messages. Newsgroups have a hierarchical naming system, with each name element separated by a period. Some of the naming system hierarchies are alternative (alt), computers (comp), miscellanies (misc), recreation (rec), and science (sci). For example, the newsgroup "alt.fan.letterman" means that it is in the "alt" (alternative) hierarchy. Or the newsgroup called "sci.math" deals with issues of science and mathematics. Newsgroups are actually a collection of discussion groups that serve as a giant bulletin board. For example, The ESL Virtual Catalog offers a series of newsgroups for teachers and learners such as alt.usage.english (Use and misuse of the English language), bit.listserv.tesl-l (Teachers of ESL), k12.lang.esp-eng (Bilingual Spanish/English practice), and misc.education.lang.english (Teaching English to speakers of other languages). There are interesting differences between Lists and Usenet (newgroups). Corio (1995b) sees Usenet to be more advantageous for teachers in that "Usenet is thrifty...it allows the subscriber full control ...and it lets you browse for interesting headlines, much like a newspaper." Goldstein (1995b) has found newsgroups to be an excellent source of information on popular culture. For him, Newsgroups are easier to manage than Lists are because "one does not get all that mail in the box. They require less commitment than Lists do because one doesn't have to worry about overflow" (Goldestein,

1995b). As Partee (1996) notes, "the quality and quantity of a student's contributions to a Newsgroup help form part of the 'class participation' component...anyone can find time and courage to write, polish if necessary, and send a paragraph to a newsgroup discussion" (p. 82). Corio (1995b) also explains why he prefers Newsgroups to Lists as follows:

> My science students prefer Usenet because they don't like reading messages that are unimportant to them. I personally like Usenet because I can follow more groups. I can only keep up with three or four **active** mailing lists, but I can easily keep up with a dozen Newsgroups since I only read what captures my fancy (p.1).

It seems that anyone who feels like posting any kind of weird messages can do it on newsgroups. People who do not belong to the newsgroup are most prone to 'flaming;' that is, "you have to wade through a mound of garbage before you get to anything interesting" (Meg, 1995). Overall, both Lists and newsgroups serve as important tools for teachers and students (Goldstein, 1995b; Corio, 1995b; Sperling, 1997; Warschauer, 1995). Both fulfill a need with bad and good points, but in general, these tools contribute to the richness of the Internet by facilitating the teaching of culture through immediate contact with native L2 speakers.

Teaching Grammar with CALL in the Eighties

Before examining the possibilities of teaching grammar on the computer, it makes sense to categorize the ways the computer can be used in ESL teaching in general. With these categories we can evaluate the potential of using the CALL as a teaching environment.

Taylor (1980) offers a three-part typology of computer usage in education: tutor, tool, and tutee. The computer-as-tutor presents tutorials, and drill and practice exercises. The computer-as-tool (such as a word processor) allows students to become more proficient at specific tasks, but does not "teach" anything. The computer-as-tutee (e.g. programming languages) is instructed by the learner. Wyatt (1984), writing specifically about ESL, suggests a three-part typology: instructor, collaborator, and facilitator. These terms correspond to Taylor's tutor, tutee, and tool respectively.

Kemmis et al. (1977), posit a more elaborate typology for the use of the computer: instructional, revelatory, conjectural, and emancipatory. Instructional CALL presents information to be learned and then checks for the students' recall. Revelatory CALL provides students' linguistic experience simulating the real world. Revelatory CALL may, or may not, explicitly check the students' assimilation of knowledge. Conjectural CALL offers trial and error tasks during which student/explorers play with language. These tasks are non-sequential, often having no fixed beginning or end. They often have the students teaching the computer, rather than vice-versa. Theoretically, students will gain insights about the language they are playing with.

Emancipatory CALL. It facilitates authentic labor. For example, the word processor frees the students from the inauthentic labor of copying drafts while facilitating the authentic labor involved in reorganization of their thoughts. Students using emancipatory CALL are seen as practitioners as opposed to the roles of absorbers, and explorers.

Higgins (1986, 1987, 1990), one of the most prolific CALL practitioners, in the eighties offers an additional format for analyzing the use of computers in language learning. Higgins presents a dichotomy between "computer-as-magister" and "computer-as-pedagogue." These terms reflect the dichotomy in classical teaching styles. The computer as magister initiates and controls procedures. It knows the truth, intervenes to guide the student toward that truth, and then judges the student's performance. The computer as pedagogue waits until summoned, responds to requests and serves. Although knowing the truth, the pedagogue patiently provides only the requested information or activities in order to lead to exploration and discovery on the part of the student.

Applying the magister/pedagogue dichotomy to Kemmis's typology, we see that instructional CALL is essentially a magister style initiating tasks, correcting and judging performance, explaining errors, and directing the learner to additional tasks. Conjectural CALL is essentially a pedagogue patiently and non-evaluative providing opportunities for exploration and discovery. During execution, revelatory CALL simulates what Papert (1980) calls as a "microworld," a small part of the world (real or imagined). Presenting and maintaining the rules of this microworld is a function of a pedagogue. It could be argued that emancipatory CALL tools act as pedagogical slaves by providing dictionaries, thesauruses, style checkers, etc. Another argument is that by facilitating production of language, emancipatory CALL tools actually facilitate natural acquisition of language. Thus, emancipatory CALL would tend to be linked with the role of the pedagogue.

Instructional CALL and Grammar. Chronologically, the first trend in CALL was an electronic extension of programmed learning or programmed instruction based on the behaviorist theories of Skinner and Bloomfield. According to these theories, all learning could be broken down into small "frames" and the learner could be drilled and evaluated in each frame until mastery. The teacher then brought the student to the next frame. In the computerized version, the progress of the student could be monitored and guided through "branching." Proficient students could automatically be sent ahead, while slower students could be routed to remedial lessons.

According to Audio-Lingual and Cognitive Code methodologies, a major focus of language teaching was grammatical structures through use of drill and practice. Thus, the earliest attempts at computer-assisted language instruction, first appearing at some large universities in the late 1950's, stressed learning grammatical structures through electronic programmed instruction.

It was hoped that computers could free the language teacher from the drudgery of classroom drilling by creating an electronic drillmaster. Another asset important for the teacher was the managerial power of the computer. It could monitor, guide, evaluate, and report on every student's progress. For the students, the computer allowed them to proceed at their own pace, their own level via branching, and receive immediate correction feedback to their work. Often this feedback could include relevant remedial information. In addition, the student was released from the pressure of performing in front of an entire class.

Despite the positive aspects of the early use of instructional CALL, the underlying methodology suffered from the behaviorist assumption that all

learning could be broken down into pre-planned discrete units. Another problem was the assumption that one student would work at each computerized workstation. This demanded computer hardware well beyond the financial means of most language learning facilities. In addition, those students attending universities rich enough to use CALL were physically and psychologically isolated from other students. Early forms of instructional CALL made human interaction almost impossible.

Theories behind CALL. In the early 1980's Rivers (1981) observed that much of the CALL material was still based on the theories of the fifties, theories that encouraged the behaviorist over-learning of grammatical patterns and creation of language habits. Five years later, Phillip (1986) wrote that much of the existing CALL programs were based on programmed learning and behaviorist psychology. Despite the theoretical discrediting of behaviorism and its resultant methodologies (principally the Audio-Lingual Method), instructional CALL survives. There are many reasons for this phenomenon.

The first reason is the lag between theory and practice in the field of language teaching. Many of the currently popular textbooks still have a behaviorist structure, despite their contemporary marketing hype. Instructional CALL is ideally suited to serve such behaviorist texts (Phillip, 1986).

Second, many language teachers have not reformed their behaviorist classroom methodologies. This is how they were taught, this is how many of them were taught to teach, and so this is how they teach. This second reason extends beyond language teaching and into the teachers' perceptions of computers in general. It seems to be human nature to approach new knowledge

in terms of what is already known. As a result, behaviorist CALL is somehow familiar while other forms of CALL are beyond the conceptual bounds of tradition-bound educators (Phillip, 1986).

The third reason is technical. Programming drill-and-practice exercises is much easier than creating advanced parsers necessary for more intelligent programs. The fourth reason is the lack of interdisciplinary cooperation between language teachers and computer experts (Phillip, 1986). And at the school level, language teachers tend not to interact with the computer-lab staff, thus rarely experiencing the immense potential of the computer. On the production level, this lack of cooperation means that programmers have little pedagogical input from the teachers. In this situation, advanced language teaching methodologies are slow to find electronic vehicles. The result is the over-production of Instructional CALL and the assumption by teachers that CALL is an extension of the behaviorist language lab (Phillip, 1986).

Yet instructional CALL grammar lessons need not be bound to behaviorist methodology. With a little creativity, traditional formats such as multiple-choice, matching exercises, fill-in-the-blanks, and freeform entrees can have meaningful content within a larger contextualized framework. Formats like the CLOZE are inherently meaningful and contextualized. Beyond these "electronic workbook" formats, it is possible to present new forms of instructional CALL that cannot be produced on paper. In addition, contemporary instructional CALL can provide the student with a great deal of control over the direction of his learning, within the general limits set by the teacher. With this in mind, meaningful and interactive

tutorials can be created with various levels of optional HELP. These tutorials can incorporate the meaningful exercises mentioned above (Phillip, 1986).

The rationale for good instructional CALL is a powerful incentive for the teacher and student: individualization, self-pacing, immediate and meaningful feedback, privatization (lack of progress-reporting), and branching. Some teachers may also be attracted by the managerial power of instructional CALL (evaluation, direction, and reporting of students' progress). If meaningful feedback is available, real learning may take place. If there are still problems, the student can turn to the teacher for aid. The teacher, now freed from monitoring everything written on paper, can concentrate on the students' real problems.

Underwood (1984) attacked the behaviorist CALL methodologies, calling them the "Wrong - Try again method." He pointed out that traditional CALL tries to simulate the least interesting elements of teaching. It tends to be authoritarian and teacher oriented. It is highly evaluative, increasing student tension and anxiety. In addition, it is over-structured because of the need for sequencing and evaluation. All of theses factors impede affective acquisition. As a result, Underwood predicted that the behaviorist CALL would suffer a similar fate as that of the language lab. As an alternative, Underwood (1984) lists 13 premises for communicative CALL where the focus is on communication rather than form.

According to Underwood (1984), some examples of communicative CALL formats are simulations, communicative games (actually simulations perceived as games), text manipulation programs such as hypertext, storyboard, or cloze formats, and text generation programs such as poetry generators. Simulations and communicative games, as defined by Underwood, have the potential of

being truly communicative. They present microworlds for the students to experience where meaning is primary. The simulations and games can generate meaningful interaction among the students who are using them. And it could also be argued that meaningful interaction with the computer is created in many cases as well (Underwood, 1987). Thus, simulations are a continuum ranging from mere catalysts for off-screen discussion to involved dialogues between the computer and its users. Through this human-human and human-computer interaction, grammar will be learned implicitly.

Teaching Grammar with CALL in the Nineties

Computer-Assisted Language Learning is changing so quickly that the only constant is change itself. In addressing the CALL issues in the nineties, we should conceive technology as a support for language learning rather than a single tool or a source of information. The premise is that using technology can change not only how teachers teach but also what teachers can teach and to whom they teach. With new technologies, we are able to reach out to the most distant learners.

By the early 1990s, critics pointed out that the computer was still being used in an ad hoc and disconnected fashion and thus "finds itself making a greater contribution to marginal rather than central elements" of the language learning process (Kenning & Kenning, 1990, p. 90). This corresponded to a broader reassessment of communicative language teaching theory and practice. Many teachers were moving to a more social or socio-cognitive view, which placed greater emphasis on language use in authentic social contexts. Task-based, project-based, and content-based approaches all sought to integrate learners in authentic environments, and also to integrate the various skills of language

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learning and use. This led to a new perspective on technology and language learning, which has been termed integrative CALL (Warschauer, 1996c), a perspective which seeks both to integrate various skills (e.g., listening, speaking, reading, and writing) and also integrate technology more fully into the language learning process. In integrative approaches, students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once-a- week basis for isolated exercises (whether the exercises be behavioristic or communicative).

Computer roles. Mills (1996) has noted that computers in language learning have two main functions: mechanical, and meaningful. The former deals with the computer in total control where the focus of attention is language skills, and the primary interaction is between the learner and the computer. The latter, on the other hand, deals with the learner in control where the focus of attention is on the use of the language, and the interaction falls between the learner and other people. In addition, according to Mills (1996) and Warschauer (1996c), computers could be used as tools providing a means of meaningful communication (e.g. e-mail exchange with a key pal). They could also be used as an environment in which the computer provides a context for meaningful communication (simulation games). It is the teacher along with his/her own students who should decide which role is the most beneficial and practical for enhancing teaching. With hardware and software limitations, the teacher should agree upon the functions and roles to follow in order to implement computer-mediated communication classes.

Research on the effectiveness of new technologies in education, including the use of computers in language teaching, has been an ongoing process. A

graduate student who set out to show the effectiveness of books in the classroom would quickly be counseled to refine the topic in order to make it meaningful, and the same advice would be given to someone trying to measure computer effectiveness in the classroom. Chapelle and Jamieson (1991) have suggested that research on computers incorporate the areas known to be relevant in language acquisition (Chapelle, 1995), such as learner field dependence/ independence and learning strategies. Rapid changes in computer technology has made the issue of zeroing in on whether and in what ways computers can be used to enhance learning.

Still, research can give some insight into how technology can and should be used, even if there are no definitive answers. The changes or lack thereof over time in what teachers and students do with and think about technology provide a perspective in viewing the role of computers in education, and maybe even some ideas about activities that motivate students and encourage learning. Proof is elusive, but as more research is performed, we come closer to having a sense of the role that technology can and should play.

Some of the major areas of software-related research in CALL have been the amount and types of interaction at the computer; effects of skill-building software, particularly writing; responses to multimedia; and attitudes toward computers and CALL. The question of how students interact at and with the computer has been addressed in a number of studies (Abraham & Liou, 1991; Dudley, 1995; Meskill, 1993), the type of software and the tasks teachers set for students had a large effect on the type and quality of student interaction with each other when working in pairs or small groups. Overall, software that requires a

minimum of verbal interaction generates very little, while having students write a joint report or otherwise produce something collaboratively results in a substantial amount of interaction.

Computer and writing. Research on specific skills other than writing hastened to focus on student attitudes toward drills and effectiveness of drills (Botiono, 1992; Evans, 1993; Wang, 1993). The results have been mixed, largely because the types of software, teacher roles, and student tasks have been quite diverse. A recent exception to the focus on drills is Hsu et al. (1993), who looked at what students did in an exploratory environment. One skill area where research is just beginning is listening, probably because sound-capable computers were not in widespread use until fairly recently.

Research on writing has traditionally explored how students felt about and performed with word-processors. Studies by Neu and Scarcella (1991) found that students had positive attitudes toward writing with computers and less apprehension about writing, respectively. Writing now includes research on e-mail correspondence as a way of improving motivation and writing skills. The broad area of writing with computers is often referred to as "computer mediated communication, " and it has its own journals, including the Computer Mediated Communication Magazine and the online Journal of Computer Mediated Communication.

Chen (1997) points out an interesting result in her study on the use of a grammar checker specifically designed to help Taiwanese students with their writing. She found that students who got computerized error feedback did more editing and improved their writing, but those who received more detailed and

personalized error feedback improved their writing more than those who received only generalized feedback.

Interactive video research gave some of the first results about multimedia effectiveness in language teaching. Liu (1992) found that computer-based hypermedia enhanced vocabulary learning, while Engelsberg (1997) had mixed results from a multimedia program. In Englesberg's study, students enjoyed the multimedia courseware a great deal for the first five weeks of the term but became increasingly dissatisfied and did not perform as well as time went on. Here, as in other areas of effectiveness research, the variables are complex.

Some questions regarding student attitudes toward computers seem to be part of most studies, including many of those cited here. Students tend to like using computers, even when they may not make much progress and when they may feel that computers do not necessarily improve their language learning (Schcolnik et al., 1995/96). Given the number of variables associated with language learning and the difficulty in controlling those variables, particularly in a second language learning setting, it is not surprising that those who design studies prefer to research the easier area of student attitude.

At this point, what is most clear as a result of research is that students tend to enjoy using computers, and that we need much more work to identify the factors involved in using software effectively for language teaching. Teachers will continue to refine their techniques with CALL over time and, it is hoped, continue to contribute to research being done in the area.

Teacher Development

It is often the case that ESL teachers, especially those teaching in non-English speaking countries, have little opportunities for their own professional development. It is likely for them to feel a sense of isolation and remoteness from the real action in the disciplines. With the existence and use of computer network (e-mail and Listgroups) as White (1994) notes, teachers of languages can easily contact colleagues and peers around the world in a cheap and efficient way. Heiman (1995) has presented various ideas about the potential of the WWW as a resource for the teaching and learning of ESL. He has explored the effects that the use of the WWW in a classroom setting might have on the role of the teacher. As Heiman (1995) further explains:

> The teacher explores the WWW for resources, evaluates and selects potentially useful sites and then stores and categorizes them for later retrieval and use by the students. In storing and categorizing the resources the teacher is establishing a frame through which the students can enter the WWW (p.2).

By the same token, Sokolik (1995) has suggested top ten spots of important links or connections for ESL teachers and students. She asserts that these sites are excellent in that they have valuable language-related material; student writing samples and sample syllabi; weather information with meteorological stations worldwide; information on applied linguistics and ESL programs.

According to McCarty (1996), Kitao & Kitao (1996a), and Wehmeyer (1996) the Internet is changing the many paradigms related to education. For teacher development, the growth of electronic journals, conferences, and exchange of

ideas with other teachers is continual and numerous. Kitao and Kitao (1996a, 1996d) show how ESL teachers can develop professionally and keep up with trends in the teaching of English as a second language by suggesting a series of links they have collected for teachers and students. Electronic newsletters and journals (Kitao & Kitao, 1996b; Warschauer, 1995) are good sources of information about teaching materials and about what is happening in the field. Mailing Lists are a convenient way of communicating with other ESL teachers. TESL-L (Kitao & Kitao, 1996a) is the largest List in ELT, and it has more than 12,000 members; many professional organizations are now online which is a perfect way to keep up with new trends in the profession. As Kitao & Kitao (1996a) note:

> In order to improve your teaching, you can get information and discuss issues with other teachers on mailing lists or web sites. You can subscribe to many newsletters and journals using the Internet. You can obtain lesson plans, teaching materials, and lessons....access to dictionaries, thesauruses, encyclopedias, and other reference materials...on the Internet (p.3).

For those who desire to do research and write academic papers, the Internet is a plausible place to go. There are massive resources for language teachers (see McVicker, 1995) available on the Web to help them with writing such as article reviews, grammar handbooks, writer's handbooks, dictionaries, APA and MLA style sheets (Coski & Kinginger, 1996; Norris, 1995). For example, there is an extensive literature review by Coski & Kinginger (1996) designed to be an online resource to aid teachers and researchers seek information on computer technology and its applications in second language teaching. It consists primarily of journal articles' summaries, along with a limited number of books' summaries. Norris (1996) has also collected a comprehensive

bibliography about portfolio assessment. This ESL and bilingual bibliography offers a collection of extended article summaries drawn from the performance and portfolio assessment literature of the past decade. Kitao's Home page (1996c, 1996d, 1996e) is also an excellent starting point for anyone interested in using the Internet sources in the classroom. One of the best ways to be up to date about any field is being subscribed to a discussion "List." As Heimans (1995) states, "By subscribing to E-mail lists concerned with second language teaching (TESL-L, SLART) teachers can participate in and initiate 'discussions' relevant to their professional concerns" (p.2). There are all kinds of interesting and sometimes, controversial discussions and topics of interest to anyone. If a teacher wants to know about a teaching technique, syllabi or simply wants suggestions about doing something, he or she will receive many replies from colleagues around the world (Wehmeyer, 1996). There is a clear spirit of collaboration and exchange without boundaries of time, space, and geography. Several benefits of using e-mail and the WWW for professional development deal with teaching materials and ideas (Weininger, Markus, Sep. 13, 1996), meeting and sharing with other colleagues, downloading all sorts of information, and lesson planning (Meg, Sep 11, 1996; Wehmeyer, 1996).

Student Empowerment

As new technologies such as the Internet become available for teaching and learning, a different kind of classroom will definitely develop. According to Ward and Davis (1996), "This environment [new technologies] has lead our children to learn differently than we did years ago. Today's children grow up in a multi-media environment of hi-tech" (p.1). That is why a different type of approach in dealing with this generation of emerging 'hi-tech' students in the

near future is required. In support of these ideas, Ann Beeson (1996) states, "Cyberspace is probably the richest source of creative, diverse, empowering and democratizing communication ever to connect people across the globe" (p.1).

Empowering students to accept responsibility for their own learning is a critical factor in the student's intellectual development and an improvement in their quality of life (Alley, 1996; Armstrong & Yetter-Vassot, 1994; Dewey, 1990; Heimans, 1995; Warschauer, 1995, 1996b, 1996d; Ward & Davis, 1996;). The use of technology (Armstrong & Yetter-Vassot, 1994) is about "empowering the learner and encouraging students to leave behind the notion that learning means rote memorization. It is about exploration and the realization that there are multiple pathways to knowledge" (p.483). As Ward and Davis (1996) assert, "The self-directed learning process allows the student to be an effective information user and to apply that knowledge in diverse situations" (p.1). For Ward and Davis, the Internet is becoming a means to allow students to become self-directed.

Tennant (1996) asserts, "Digital libraries will revolutionize how students, faculty, researchers, and citizens access and use information" (p.37). Warschauer (1996b) found that student empowerment is one of the various factors affecting positively students' attitude towards use of computers. In other words, student empowerment positively affected such aspects as "enhancing personal power, overcoming isolation, and making it less threatening to contact people" (p.7). To support these ideas even further, Warschauer et al. (1996d) found that "computer learning networks do have a potential to empower students, when they are used appropriately" (p.1). Students should learn to use the computers, rather than feel used by them. Warschauer et al. (1996d)

examined three aspects of empowerment in their study: student autonomy (a shift in authority from teacher to student); equality (computer networking as democratizing effect); and learning skills (critical learning). Teachers should strive for developing strategies to help students use the Internet as a more effective tool, fostering student-student communication (Warschauer, 1995).

According to Frizler (1995), "the Internet can add to and improve upon what ESL teachers have been doing for years." She found that the Internet provides ESL students with opportunities for exposure to natural language outside the classroom, collaboration (both inter- and intraclass), student responsibility for learning, motivation and enjoyment of the learning, cross-cultural communication and awareness of global issues and concerns.

Foreign Language Teaching Standards and the Internet

When examining the goals of foreign language (FL) teaching, one will soon discover that the use of the Internet can be a useful aid in attaining these objectives. If one looks, for example, at the American Standards for Foreign Language Learning (National Standards in Foreign Language Learning Project, 1996; see Appendix C), one will see that there is a focus on language, communication, and culture that makes the application of authentic materials increasingly important. Moreover, in this context teachers are looking for better ways of providing experiences that will improve their students' knowledge and skills in these target areas (LeLoup & Ponterio, 1998).

According to LeLoup & Ponterio (1996) by using Internet activities teachers can devise them in such a ways that they could be good exemplars of the goals of the Standards for Foreign Language Learning. Standard 1.1, for instance, says that students should 'engage in conversations, provide and obtain

information, express feelings and emotions, and exchange opinions.' (American Council on the Teaching of Foreign Languages at http://www.actfl.org/htdocs/standards/standards.htm), If there is only the teacher to talk to, then engaging in real and meaningful conversations is virtually an unattainable goal. This is where the Internet comes in. Through various applications, such as e-mail and Internet Relay Chat (IRC), an exchange of ideas and opinions can take place.

By having access to vast resources of authentic material about foreign cultures, students will be able to gain knowledge and understanding of these cultures (Standard 2). The Internet enables them to participate in multilingual communities at home and around the world (Standard 5), so that they will use the language both within and beyond the school setting. The ultimate goal of turning students into life-long learners 'by using the language for personal enjoyment and enrichment' (Standard 5.2) becomes much more realistic when students continue to use the Internet (American Council on the Teaching of Foreign Languages at http://www.actfl.org/htdocs/standards/standards.htm).

Raimes (1983) views teaching language as a paradigm which sees language as communication; emphasizes real language use; recommends a student-centered classroom; encourages real language acquisition instead of just learning a set of grammatical rules; develops humanistic, interpersonal approaches; and considers the nature of the learner, the learning process, and the learning environment.

The Internet can play an important role in each of these categories. The Internet is all about communicating and offers possibilities that would never be feasible in a traditional classroom setting. The language used on the Internet is real language and not especially designed for textbooks. Furthermore, the use of

the Internet supports the shift from the traditional teacher-centered classroom to one in which the student is in the center--students are motivated by using computers and talking 'live' to others. Without being conscious of it, students will no longer consider learning a language a boring enterprise. They will be encouraged to learn more. Finally, since conveying messages plays a paramount role on the Internet, students will learn social skills and as such the Internet can be seen as an agent for socialization.

In the end, it will be up to the teacher to integrate the application of the Internet into the curriculum. Since target language communication and cultures are well within reach through these new technologies, this will make a tremendous impact on the ability of students to communicate directly with native speakers (LeLoup & Ponterio, 1998). With the advent of the Internet in schools, old-fashioned teaching methods, such as teaching grammar for the sake of grammar, will hopefully become a thing of the past, if this is not already the case.

On-line Instruction at the University Level

As institutions of higher education become more involved in the rapid acceleration of the use of on-line instruction as a means of delivering instructional content, there is the urgency to uncover various issues of relevance which are being raised concerning how content, instruction, learning, quality, etc. are being tackled in order to validate this new medium of instruction. In general traditional instruction involving face- to-face interaction between students and instructors has come to be viewed as the most effective form of teaching. There are general guidelines and principles that apply to traditional teaching, but they are rarely judged to prove effectiveness of one's teaching or the quality of a course. However, the emergence of asynchronous teaching on-line has caused

questions to be raised about this mode of instruction and how the quality compares with traditional forms of instruction (Meyen et al., 1998).

In on-line instruction planning, there is a need for universities to directly address issues related to faculty such as release time, training for distance teaching, tenure and promotion, and team approaches to course design. Access to content should be in different formats and the institution should facilitate resources (computers to faculty and students). In addition, some of the institutional questions that will need to be addressed include:

(a) What will be the management structure for on-line instruction, and how will it relate to academic units and continuing education?
(b) Where will responsibility for technical support be vested, and how will the unit relate to academic units?
(c) How will the development costs be covered?
(d) Will on-line courses be noted as such on transcripts?
(e) For on campus students wishing to enroll in on-line instruction, will they be limited in the number of on-line courses they can apply to graduation? (Meyen, et al. , 1998, p.3)

The answers to those questions will certainly cover a lot of terrain concerning the availability of new policies and standards. On the other hand, there are some barriers for faculty to adopt and participate in on-line instruction. Some of these barriers deal with promotion and tenure at college and institutional levels, over-load in distance teaching assignments, intellectual property and academic quality (Meyen, et al., 1998).

Meyen et al. (1998) argue that central to the emergence of the Internet as a delivery mode is the issue of who decides if an institution will become a participant in using the Internet for instruction.

According to Meyen at al. (1988):

> State educational agencies and systems of higher education are making commitments that are system- wide, in contrast to institution by institution... Governors are also becoming involved and taking the lead as in the case of Western Governors' University. Partnerships being developed between major industries and institutions. And you are seeing this occurring at a rapid rate. The delivery technology is in its infancy, but its potential is clear. The availability of the Internet and the movement toward the capacity for asynchronous learning creates a paradigm shift that has yet to be fully accepted by all faculty. This is largely due to the speed at which the capacity for on-line instruction has occurred. As more universities go on-line with courses and degrees the more quickly the education community will come to accept the paradigm shift. A determining factor will be the level of acceptance of on-line instruction by students (pp. 55-56).

So much work must go into the design, development, and maintenance of each course that it becomes an economic imperative to do it "right the first time" or at least evolve it into the best it can be. Once the courses are online, they are subject to constant scrutiny by students, academicians, and professionals in the field, and accreditation bodies. In relation to the type of effect online instruction will have on traditional education, Meyen declares,

> I think that online instruction will have a very significant positive effect on traditional instruction, because of the fact that it does focus on engaging students. It focuses on making good decisions about content, structuring content, and providing assessment that's really relevant to what you taught.... I just think that the instructional accountability that's placed on you in teaching online eventually will splash over to traditional instruction and will drive the quality of traditional instruction up (Burgos, 1998, p. 6).

Standards, of course, will help to jump-start the process of creating effective online instructional products by establishing criteria for determining product quality. It is in everyone's best interest to develop standards for online instruction.

Skepticism about Internet Use

Even though there are thousands of people that believe in the benefits of the Internet and computer-mediated communication, there are still many who are skeptic about its use in the classroom, too. One anecdote which portraits this issue is told by Frizler (1995a):

> This time a year ago, I approached someone in our faculty about being one of my thesis advisors. When I explained my ideas about using the Net to teach English, he told me that wasn't very interesting (no joke!) and that he would not want to be part of my project. Two weeks ago, at my graduate seminar presentation on my project, the same instructor was amazed to not only hear about the results, but also see my Web page, SchMOOze, and a Web page created by my students. He asked questions with enthusiasm and even approached me afterwards to tell me how proud he was of the work I'd done (p.1).

Actually, the skepticism about computers and networks in education has been discussed in various Lists (Corio, 1995a). There is a concern for some teachers who think that "Internet access will distract students from their course work, and that they will 'play' on the Internet rather than do their required coursework" (Corio, 1995a). As Corio (1995a) expressed:

> What a world. Academics are still in their monastery mode, where they assume that everything that occurs outside the main wall is corrupt. Why do you suppose people are flocking to the Internet and the Web? Because their 7th grade social studies teachers are assigning it? Because English instructors have recommended it? No, because the written word is compelling, more so to the writer than the reader, and the Web is creating a new culture of writing in America (p.1).

Armstrong and Yetter-Vassot (1994) have a suggestion for all those skeptics or critics of technology: "Let us adopt the technologies which will allow us to do those things that we cannot presently do in the foreign language classroom, or which will significantly improve those things that we already do well" (p.481). Rose & Meyer (1994) assert that "any new technology threatens to change the culture...we are a culture of print, and our educational structures are built around that premise" (p. 239). That is why there is a need of real and meaningful dialogue capable of generating critical thinking. Without dialogue there is no communication, and without communication there can be no true education" (Freire, 1994, pp.74-75). As Hazemi, and Wilbur (1998) state, " A clear forecast is not likely to appear until implementations are in place and thoughtful evaluations are conducted (p. xi). Thus, explaining the many inherent benefits of CMC to stake holders is a commitment and responsibility all of us have in the years to come.

Conclusion

In this review of the literature, advantages of computer-mediated communication and many ways in which the Internet can serve as an educational tool have been discussed. It was widely expressed that asynchronous communication can provide more convenience for participants, potential for more contact, more control for students, and the necessity to communicate in writing. The fact that CMC increases social distance might encourage shy students to communicate and ask questions without embarrassment, as well as encourage discussion of ideas. It also enriches our experience as teachers, allowing us to communicate easily with thousands of people (Warschauer, 1995; Sperling, 1997).

Computers and CMC represent the new form of publishing words, of moving ideas between people and across cultures, one that will liberate intellects. The Internet could become an ideal place where students may continue their learning outside of the classroom and after a course ends. Although using the Internet for teaching and learning a second language is very new, we need to explore ways to find those materials and experiment with them in order to improve our teaching. Overall, It is important to emphasize the fact that technology supplements rather than supplants the role of the teacher in the classroom. Thus, computers, in general, should be accepted as useful educational tools. Without a doubt, computers in education are here to stay, and their impact is being felt more each year.

CHAPTER THREE

METHODOLOGY AND PROCEDURES

This study proposed to describe and explain the perspectives of ESL students on the use of a Web-based support grammar course (see Figure 1) as a supplementary tool for practicing and learning English grammar. The research questions that guided the study were:

1. In what ways do ESL students use the Internet resources found in the Web site NetGrammar for enhancing the learning of English grammatical structures?

2. What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?

3. What are the students' perspectives on the interactive Web exercises for practicing English grammar?

The following techniques were used to help understand and answer the exploratory questions:

a. Observation, field-notes, personal journal, e-mail.

b. Recording devices for interviews (Audio-tape recorder).

c. Interviews: informal open-ended and structured questions.

Role of the Researcher

My personal and professional curiosity is the implementation of the Internet in the ESL teaching and learning context. Since 1994 I started joining ESL discussion Lists such as TESL-L, and began looking for valued information

for my classes in Costa Rica. By 1995, I was really involved in the use of Internet resources for the ESL classroom. I delivered various workshops to colleagues on the use of e-mail and the WWW for teaching ESL.

My interest, at this moment, is on the use of Internet resources for ESL teaching and learning. Thus, I would like to obtain a better understanding of what really happens in the "virtual classroom." My primary role in this study was as an interviewer and as a "virtual grammar tutor." I was in charge of the creation of the grammar content to be delivered over the Web. Three months before the actual study started I began gathering information found on the Web that addressed grammar points covered in the syllabus of the traditional classroom and in the textbook used in the classroom. These ESL Web sites had already been on the Web for grammar practice. I also wrote field-notes during and after the interviews.

During the first two weeks of the study as I observed the participants in the computer lab, I decided to change the navigation, and look and feel of the Web site to meet their needs. This was due to the fact that some of them had problems with the navigation and the functionality of the Web site pages.

Access to the Site and Selection of Participants

Setting. This study was conducted in an Intensive English program (IEP) on the campus of a state research university in the Midwest of the United States. This institution of higher education is situated in a rural mid-western community. The IEP courses provide intensive English language instruction to non-native speakers of English. All international students whose native language is not English with a TOEFL score below 550, including foreign students and residents

or citizens of the United States, are required by the Faculty Senate Rules and Regulations to enroll in the English language courses, if any, specified for them by the IEP before enrolling in any academic work.

The course chosen for this study was a 16-week ESL course that focused on the teaching of grammar. It was a third level course (out of five levels). The students who took this course had a TOEFL score between 400 and 550. According to the proficiency and placement test made at this institution, these students were considered low intermediate. The students met in a classroom twice a week for 45 minutes each day. In addition to their regular course assignments, the participants agreed to take a supplementary Web-based support grammar course (NetGrammar) in the Computer Language Learning (CALL) laboratory. Students were required to use the lab for extra practice in grammar through assigned CD-ROM grammar programs. The teacher of the course agreed to have the students to use the Web site, NetGrammar as part of the required outside class assignments.

In order to carry out this study, the researcher wrote a letter to inform the director of the Intensive English program (IEP) and the grammar instructor about the development of the study (see Appendix A and B). Access in qualitative studies involves more than permission to engage in a classroom study (Berg, 1995; Stake, 1995).

According to Stake (1995) gaining access is not an easy task:

> The procedures for gaining access are based on the enduring expectation that permissions are needed...a brief written description of the intended casework should be offered...Plans for distribution of the report should be indicated, with any intention or opportunity for review of the drafts by actors. Expectations of any plan to anonymize should be expressed (p. 57).

Thus, it was critical during the early stages of preparing this study to take into consideration such issues as participants, settings, and the content to be delivered online.

Participant Selection. In order to select the participants the technique purposeful sampling was used whereby individuals are selected from a specific group to factor out lack of interest as a confounding factor (Wiersma, 1995, p. 259). My assumption was that learners who were interested enough in an on-line course were more likely to provide constructive criticism of the value of Web-based material to complement traditional classroom activities. Eight (8) ESL students took part in this study. I, with the permission of the instructor, visited the class Grammar Level III in order to explain the purpose of the study. In the end, I asked for volunteers. The eight participants who volunteered signed a consent form (see Appendix B). In order to preserve the privacy of the participants, all were assigned pseudonyms; their countries and other attributes, however, are accurately mentioned.

The participants were willing to participate in at least two formal semi-structured interviews during the semester. In other words, each one agreed to a pre-determined level of participation. The teacher encouraged all her students to

take advantage of the opportunity. She agreed to give me 30 minutes to take the students to the CALL lab to give the students a tour guide and a tutorial about the Web site NetGrammar. Handouts were distributed and a hands-on practice was carried out at the lab (see Appendix E).

Interview Protocols. The research questions of this study served as a guide to the researcher in constructing the interview protocols (see Appendix D). The Interview Protocol I focused on the following research questions:

1. In what ways do ESL students use the Internet resources found in the Web site NetGrammar for enhancing the learning of English grammatical structures?

2. What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?

The Interview Protocol II was directed towards the following research question:

3. What are the students' perspectives on the interactive Web exercises for practicing English grammar?

McCracken (1988) points out that a protocol is necessary as a guide to meaning. The overall spontaneous quality of the interview must be conserved in order to produce an atmosphere of open endedness and trust. According to Mishler (1986), interviews can be described as "speech events", a description that "implies fluidity, joint construction of discourse, and contextual interpretation – considerations that fit into the constructivist stance" (p.137).

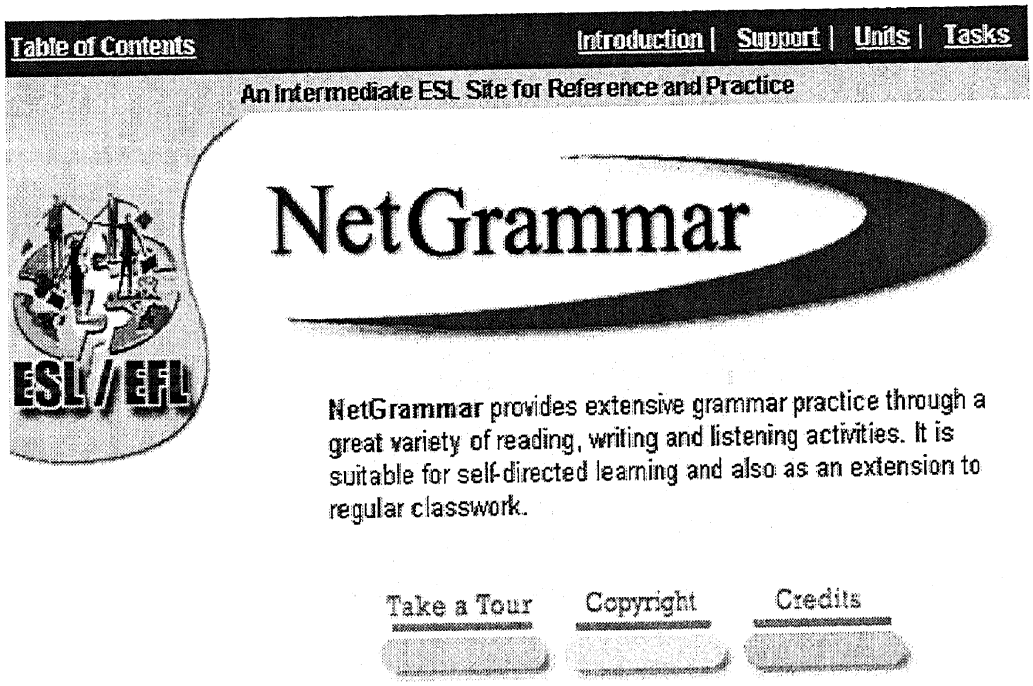
Overview of NetGrammar

A hypermedia program called NetGrammar was developed in order to help the participants master the English grammar in an interactive, self-paced fashion, and to study how the participants use the Web resources found in NetGrammar for learning grammar. NetGrammar is a grammar reference Web site for ESL learners (see Appendix F). This Web site focuses on English grammar through interactive listening, reading and writing activities. Its URL is at http://busboy.sped.ukans.edu/~alleng/netgrammar. The content of the 15 units is supportive of the ESL grammar textbook used in the grammar course. There are many mechanical (drills), and communicative (open-ended exercises) exercises. The exercises in each unit enabled the participants to practice what they had learned in new contexts.

The major goal in the development of this program was to provide a Web-based grammar reference that served as a vehicle for classroom instruction and to answer the questions in this study. Research in second language acquisition (Celce-Murcia & Larsen Freeman, 1999) suggests that some students expect and need to learn the formal rules of a language in focus. NetGrammar was pilot-tested for accuracy in the content and types of exercises, and the user-friendly interface (Did the users have problems navigation the program?) as part of my master's project in Educational Technology. It was evaluated by 23 ESL teachers and 32 students around the world. After the alpha and beta testing, changes were made to accommodate the needs and suggestions of the subjects involved. In order to evaluate NetGrammar, a questionnaire was made available to the users. The final results of the survey are in Appendix F.

Figure 1

NetGrammar Homepage



Structure of NetGrammar

Introduction. The introduction level includes features that introduce the student to the focus of the units. The intended sequence is from left to right, however students can review the features in whatever sequence they prefer. Once students have experienced working on the program, they will determine which sequence works best for them.

About NetGrammar. This is a general overview of how the program came to be. The focus is on letting students get acquainted with the content as well as the theory behind it.

Topics and language functions. In this section, there is a specification of all the topics of the 15 units plus the language functions. For example, Unit 1

deals with "Getting to Know Someone" and there are functions such as listening to Emily introduce herself, skimming, scanning, etc.

Structure. The structure of NetGrammar is modular. While the content, activities and tasks will vary, there are four major levels including Introduction, Support, Units, and Tasks. Each of the 15 units consists of five sections or elements: Preview, Grammar Focus, Listening, Reading, Writing, and Review.

Technical help. Technical Help contains information to assist users in understanding how to use NetGrammar and overcome technical difficulties. Careful attention has been given to designing online units that are user friendly and technically stable.

Support. The Support Level contains features students can access that are designed to enhance the instruction offered at the Unit level. These supports lead to resources that are tied to the various units such as irregular verbs, phrasal verbs, spelling rules, and a glossary.

Irregular verbs. Irregular verbs charts focus on frequently used verbs used throughout each unit. These charts provide a clear visual reference for irregular verbs in English.

Phrasal verbs. This section provides useful information about common phrasal verbs in English. There will be lists of those key features about these verbs. This will serve as a reference source.

Spelling Rules. This section shows lists of spelling rules for the different tenses in English. That is, there will be lists of words with spelling rules for the present progressive, simple present (third-person singular), simple past tense for regular verbs, comparative and superlative adjectives, adverbs, and directed

questions.

Pronunciation rules. This section will show the pronunciation rules of plural nouns and regular verbs. There are pronunciation rules for simple present tense (third-person singular), and simple past tense of regular verbs.

Glossary. A glossary of grammatical terms is a composite of the grammatical terms appearing in each unit. Each entry in the glossary is defined in a manner directly related to its use in the units.

Units. The instructional units are the heart of NetGrammar. There are fifteen (15) units. This level contains the units for the teaching components. Each unit is independent, but at the same time interrelated with other units. Each unit includes 5 sets of resources: Preview, Grammar Focus, Listening, Reading, Writing and Review.

Preview. This section provides the student with the most detailed reference on what will be covered in a unit through unit goals, grammar notes and a warm-up activity. There is an example of the type of interactive exercises the students will encounter in the unit.

Grammar focus. In this section, the students have the opportunity to review the grammar points clearly. There are tables and graphical representations of those structures so that they can be easily practiced. Grammatical explanations and examples are shown. The different grammar points to be covered in the units were based on the grammar textbook chosen for the course.

Listening. This section requires the use of the plug-in RealPlayer, which allows students to review grammar structures being studied in each unit. There

are short conversations with audio plus some exercises about the conversations.

Reading. This section allows the student to review all of the grammar points in all contexts. There are many opportunities to practice reading skills such as skimming, and scanning in meaningful ways using authentic readings. Students will encounter all kinds of activities such as pre-reading, and post-reading.

Writing. This section allows students to put into practice what they have learned in the units. They will write short compositions using the content in each unit. The writings can be e-mailed to the instructor or other students.

Review. This section is an overview of the whole unit content. It will have all kinds of multiple-choice exercises about the content in the units.

Tasks. After completing all units, self-testing exercises will be available. The practice exercises are designed to allow students to further practice the content learned. Besides the exercises found in this section there are many links to other grammar Web sites, which have been developed by ESL teacher. This page is called WebLinks (see Appendix H).

Data Collection Procedures

The introductory session in the CALL lab to the Web site NetGrammar was very important because the participants had to create their accounts and passwords to get access. The participants were responsible for logging in to this Web site. It is important to note that NetGrammar consisted of a collection of links to other Web sites that had on-line grammar exercises. NetGrammar was organized around 15 units. Each unit in NetGrammar corresponded to the units in

their grammar textbook. For example, Unit 3 in the textbook dealt with Count and Noncounts Nouns. Thus, when the participants visited NetGrammar Unit 3, they found fifteen links to Web sites that had on-line exercises dealing with count and noncount nouns. In short, I collected and organized interactive Web exercises tailored for the grammar sequence of the textbook. I also monitored the interaction of the participants by observing them while using the Web-based program NetGrammar. The participants visited NetGrammar at least once a week. Because the participants of this study were volunteers, it was possible for them to withdraw from participation of the study at any time.

Data Collection Phases

Phase 1. The participants were asked standardized, open-ended questions. These questions were designed to solicit information from participants based upon their experience and interaction with the Web site NetGrammar and the other supplementary grammar materials such as the CD-ROM programs. The interview questions were written down in advance, the way they were asked during the interviews. All participants were asked the same questions in the same order. However, follow-up questions were asked depending on the particular answers. The duration of each interview was about 30 minutes. After the interviews were tape-recorded, they were transcribed verbatim into a word processor.

The participants had worked on the Web site exercises for about four weeks before they were interviewed. During this first round of interviews, all eight informants participated, however, for the second round of questioning, one of the participants had withdrawn from the class, and two more could not be contacted because they had left for their respective countries at the end of the semester.

Observations were carried out at the CALL lab and field notes were recorded during the first weeks of the study. In most of the cases, I arranged for face-to-face interviews through e-mail messages. All the participants agreed to check for the accuracy of their transcribed interviews. That is, once the final draft of the analysis of the data was finished, the participants would receive a copy to comment on it (member check). My goal was to find what issues the participants believed to be important.

Phase 2. Information collected during the earlier phase was reduced using a unitizing and indexing method with the qualitative data analysis software NVivo. Unitizing involved the process of selecting stand-alone chunks of information obtained during interviews. These chunks were generally individual assertions. These assertions were then organized into categories. After the data was categorized, assertions were triangulated with the content on the Web sites, the interview transcripts, the field notes and the observations. Here the software proved to be very effective in that the exploration of text and patterns of coding was facilitated through its flexible searching tools. Protocol I guided the development of questions for interviews during the second phase. Subsequent informal interviews and e-mail correspondence were conducted as necessary to achieve triangulation of assertions. In addition, some assertions were triangulated through a review of relevant literature.

Phase 3. A draft of the study report was written. During this period, the researcher continued to identify gaps or missing information. This study report was then given to the participants to determine if their contributions were accurately recorded (member check). The final portion of the study was the audit trail.

Data Analysis Procedure

First stage. This stage dealt with the analysis of the standardized open-ended questions, which were constructed to elicit the key issues as the participants practiced grammar on-line using NetGrammar. There were two interviews, one conducted at the beginning of the semester, and the other at the end of the semester. At this stage, the data was unitized and categorized (Lincoln & Guba, 1985) using a computer software package for qualitative data analysis called QSR NUD*IST Vivo (Nvivo). NUD*IST stands for Non-numerical Unstructured Data Indexing, Searching and Theorizing.

Second stage. This stage served to reduce the data (assertions) and categorize it. NUD*IST Vivo® helped the researcher with the analysis of the data in three important ways. First, it helped to speed up the mechanistic process--how to store, code and organize the data (categorizing the selected data bits). Most importantly, NUD*IST Vivo® helped the researcher to be patient and curious as he synthesized different categories, and patterns into an emergence. NVivo also allowed the storage of the interviews, the field-notes, web site pages, the digitized recording, the photos, the several drafts, the final paper, and presentation aids. Finally, by enjoying easy access to the data, the researcher speeded up the qualitative research process and attended to the importance of the data. It is important to emphasize that NUD*IST Vivo® did not do the coding for the researcher. It was a user-friendly program that did the housekeeping. It kept the data bits alive, coded, saved, and easily accessible. The software proved to be a great help, reliable source and a trusted "crew member" in my journey to data analysis. During Phase 2, the categories

established in Phase 1 continued to be refined including the reorganization of categories, the creation of new ones, or elimination of existing categories.

Third stage. The emergence of categories was refined through the adding, deletion or reorganization of existing categories. In this stage, a preliminary draft of the study was produced. In order to assure dependability (reliability) and credibility (validity), a member check was conducted to determine the accuracy of the information reported. As soon as the first round of questions was finished, the researcher transcribed it. For the second round of questions, each of the participants was given the transcribed responses to check for accuracy.

Validity and Trustworthiness

In order to carry out this study, and to reduce the likelihood of misinterpretation, I used triangulation through the ethnographic interviews, the grammar Web sites, the field notes and observations, and the grammar textbook, which provided a more complete picture of the participants' experience throughout a semester. As Stake (1994) points out "triangulation has been generally considered a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation, and also to clarify meaning by identifying ways the phenomenon is seen" (p. 241). The study was validated by an independent auditor. The purpose of the audit was to ensure dependability (to check if the inquiry is methodologically sound), confirmability (to check if the assertions are grounded in the data), and credibility (to check the truth value of the inquiry). Finally, an audit trail was carried out (see Appendix E) to check for the accuracy of the study through the trustworthiness checklist developed by Edward

Halpen, from Linking Auditing and Metaevaluation: Enhancing Quality in Applied Inquiry by Thomas Schwandt and Edward Halpern (Sage publications, 1988).

Statement of Ethical Responsibility

One important aspect of qualitative research is the involvement with other people's lives which the researcher must be aware of due to the ethical principles of professional responsibility (Janesick, 1985; Milles & Huberman 1994; Stake, 1995; Altrichter, Posh, & Somekh, 1995, Berg, 1995). As the American Anthropology Association states about the code of ethics for ethnographers:

> In research, the anthropologist's paramount responsibility is to those he studies. When there is a conflict of interest, these individuals come first. The anthropologist must do everything within his power to protect their physical, social, and psychological welfare and to honor their dignity and privacy (Janesick, 1985, p. 145).

Thus, for the purpose of this study, the researcher informed the participants of the confidentiality of their responses, and of the fact that they could exit the study at any time (see Appendix D). In addition, this study had the approval of the Advisory Committee on Human Experimentation--research project # 11439.

Ethnographic Studies in ESL

As many scholars agree, theory is an important and essential component for helping researchers decide what kinds of evidence are likely to be significant in answering the research questions posed at the beginning of the study (Bailey & Nunan, 1996; Denzin & Lincoln, 1994; Freeman, 1996; Janesick, 1994; Lynch 1996; Woods, 1996). In the last decade several ESL qualitative studies have emerged in which the problems of the studies differ considerably (see, Allwright 1988; Bailey & Nunan, 1996; Campbell 1996; Chun, 1994; Ellis, 1995; Frizler,

1995; Katz, 1996; Larsen-Freeman 1983; Peck 1996; Shaw 1996; Tella, 1992;Watson-Gegeo 1987; Warschauer 1995, 1996). Jack. C. Richards (1994) has stated that the combination of intensive ethnographic research in classrooms with teacher's ethnographic observations of their own practice can potentially produce "the multilevel understanding of good teaching."

Watson-Gegeo (1988) has pointed out that the promise of ethnography for ESL research, teacher training, and classroom practices "lies in its emphasis on holistic, richly detailed descriptions and analyses of teacher-learner interactions and the multilevel contexts in which these interactions occur" (p.588). However, we should bear in mind that it is the researcher's responsibility to be "realistic" about his claims and not to "generalize" beyond what the methodological limitations permit. Some important and distinct principles of ethnographic research focus on people's behavior in groups and on culture patterns as well as on individuals and trustworthiness (Schwandt, 1994; Denzin & Lincoln, 1994; Stake, 1995). For an ethnographic study to make sense and to be "validated", the researcher must attend to the total situation and integrate information from all directions simultaneously— interviews, observations, and collected cultural artifacts (Hathaway 1995; Denzin & Lincoln, 1994). There should be a constant and systematic contact with the actors and with the environment in which the study is conducted.

Janesick (1994) proposes that qualitative research "depends on the presentation of solid descriptive data, so that the researcher leads the reader to an understanding of the meaning of the experience under study" (p.215). Hence, the researcher is to inspect the data carefully and completely over a considerable time

period, following a series of procedures. This, then, allows the researcher to unfold the "meaning in participants' lives" (Janesick, 1994, p. 216). By approaching the data in a heuristic fashion, there is an excellent way to describe and explain the phenomenon in question.

Field researchers, according to Watson-Gegeo (1988), "do not use quantified, fixed-categories checklist observational schemes in their observations because such schemes cannot capture the complexity of classroom interaction and cannot address the relationship between verbal and non-verbal behavior" (p.583). Ethnographic studies in general offer, and for the context of ESL in particular, an alternative to top-down research approaches, which are based on preexisting models.

Conclusion

In Chapter III, the methodology of the study was described in detail. The procedures for the ethnographic interviews included the use of a computer software package specially tailored for qualitative data analysis (NUD*IST Nvivo). This qualitative study was driven by the following sources: interview protocols, classroom and lab observations, field-notes, Web pages from NetGrammar, and other Web sites. As it was clearly expressed throughout the literature on qualitative research and methodology, true ethnographic research is systematic, detailed, and rigorous, rather than anecdotal. Hence, ethnography for the ESL context insures a holistic, detailed description of the interplay among participants and the many contexts in which these interchanges occur.

CHAPTER FOUR

PRESENTATION OF INTERVIEW DATA

The purpose of this study was to describe and explain the perspectives of eight ESL students on the use of the Web-based grammar program NetGrammar for practicing and learning English grammar. The aim in this chapter is to present the interview data gathered during the course of a semester. Tables of the participants' responses and narrative quotations are included to provide the reader with a summary of responses. Because of the low level of proficiency in English of the participants, grammatical mistakes are seen throughout the case study report as the researcher uses direct quotes from them. The reader will find insertions within the quoted data from the participants. These insertions in brackets are the author's but they do not change the meaning of the excerpts.

Description and Context

José, a professional from Venezuela, walks down the aisles of the building where the computer lab is located. As he enters the lab, he immediately signs off a sheet where the time of arrival and departure from the lab get recorded. He hangs his winter jacket on a wall hanger and heads towards one of the 12 computers available. As he sits, he clicks on the space bar of the keyboard and the screen starts to show slowly its desktop and programs icons. José then opens his notebook and searches for the URL of NetGrammar's address. He types in the address and the first screenshot asks for the username and the password. When he finishes entering the information, he clicks on the button "login" and immediately there is an error message in front of his eyes. "What is wrong? I must have put the wrong password," he expresses. Next time, he is more careful and types in his

password as he looks at his notebook.

When José logs on to NetGrammar, he sees NetGrammar's Home page. Now José is ready to use the program. He chooses Lesson 3 and starts doing the first grammar exercise. He reads the instructions and starts the exercises by clicking on the options given. As he reads the questions, he sometimes scratches his head and looks at the ceiling in search of the correct answer. When he is finished with the exercise, he clicks on the button "check answers" and there is an immediate feedback telling him that he got eight out of ten questions correct. Next to the comments, there is the note "80% correct," and a statement with suggestions as to what grammar notes he should review.

José seems happy about the results; however he resets the exercises, goes back to the "Notes" section in NetGrammar, spends some time there, and starts the exercise all over again. This time he gets all the answers correct and continues with the next exercises. You can see he is proud of himself as he expresses, "YES! I got you this time, baby!" The scenario above describes one of the lab sessions that José went through as he visited the Web site NetGrammar. At times, there was a mixture of facial expressions ranging from happiness to frustration.

Participants. José was one of the eight participants who participated in this study. Even though most of the students (15 students) in the grammar class signed the consent form letter, and used the Web site during the semester, only eight students actually participated in the study. There were six males and two females. Their ages ranged from 18 to 37. Khalid came from the Middle East. His English was very good. He was just taking English courses to take the TOEFL and possibly enter a university in the United States. His interest was in business.

Manolo and José came from South America. Manolo was a young lawyer in his country. He came to the U.S. to learn English. His major goal was to score high in the TOEFL so that he could study in an American university. He was a very conscientious student. He preferred to speak in English among Spanish speaking friends. He was taking one course in journalism. José was a psychologist in his country, Venezuela. His whole family came with him to the United States. He was applying for graduate school. Pablo was from Central America. He was trilingual. Even though he never studied English in his home country, his English was good. Tomás was from Mexico. He was already in graduate school, studying Spanish literature. Vladimir came from Russia, and he was just taking English classes. He was planning to go to a community college. Cindy and Oui came from Asia. Cindy was applying for graduate school in education. Oui had just earned her B.A in instructional technology in her country. She was planning to get her master's at an American university. The demographic information about the eight participants is summarized in Table 1. It is important to note that all of the participants had similar computer skills. Although Oui had only three months' experience with the Internet, she was a computer science student in her country. All of the participants could communicate in English effectively. This was key at the time of the interviews, however I had to spoon-feed some of the participants in order to get more information from them. Even though four of the participants and I were native Spanish speakers, only English was used during all the interviews. However, in informal conversation, Spanish was also used with those participants.

Table 1

Profile of Participants according to country, type of education, gender, and Internet experience

Participant	Country	Education	Gender	Internet experience
Cindy	Malasia	B.A.	Female	1 year
José	Venezuela	M.A.	Male	7 months
Khalid	Kuwait	B.A.	Male	1 year
Manolo	Colombia	B.A.	Male	6 months
Oui	Thailand	B.A.	Female	3 months
Pablo	Guatemala	B.A.	Male	1 year
Tomás	Mexico	M.A.	Male	2 years
Vladimir	Russia	Some University	Male	6 months

Table 2

Profile of Participants according to language, months in the U.S. and TOEFL score

Participant	Language	Months in the US	TOEFL
Cindy	Malasian	2	490
José	Spanish	6	500
Khalid	Arabic	6	470
Manolo	Spanish	12	480
Oui	Thai	1	530
Pablo	Spanish	14	440
Tomás	Spanish	24	570
Vladimir	Russian	36	420

Grammar class. The main purpose of this English Structure III class was to study grammar points at an intermediate level. It consisted of a review of basic grammatical structure of English and practice in using intermediate and advanced patterns appropriately and effectively to perform language functions and to convey meaning. Its emphasis was on oral and written communication. This class also prepared students to pass the TOEFL test as well as the institutional exam at the Intensive English Program. The students met everyday for 45 minutes. They were required to use the CALL lab at least twice a week. Specific software programs

were assigned for the lab. The major activities in this class were to practice the English grammar structures assigned for each week in order to cover the chapters in their grammar textbook. There were many drill and practice types of exercises and many handouts given by the ESL instructor. The students in this class answered all the questions orally and in a written form. There were also group work and the teacher tried to practice the English structures in many situations and with plenty of examples. The atmosphere of the classroom was very pleasant and the students felt free to express themselves.

Computer lab. Most of the participants regularly had to go to the Computer Language Laboratory to get access to the CD-ROM programs and NetGrammar. However, in order to use NetGrammar, they were not limited or constrained by the lab hours since all they needed was a computer with Internet connection. Thus, any of the laboratories available at the university or their PC's at home could be used to work on the Web-based grammar program.

The computer lab of the IEP had a relatively large, rectangular space, about the size of a standard classroom. It was furnished with four three-person lab tables placed end to end and arranged in two long rows. Each row consisted of two long tables. There was an aisle between the two rows. Each lab table had three networked multimedia computers, and a small workspace providing room for the student to refer to books or to place handwritten drafts or notebooks (see Figure 2). Against one of the sidewalls was the instructors' workstation. The server for the system was located on your right as you entered the lab. Here the lab assistant had the control sheets where students would sign up every time they entered and sign off as they leave. This lab was on a Local Area Network (LAN), and wired for

the Internet. Against the sidewall were a phone and a laser printer where the students would usually print papers or other assignments. Students would come to this lab in small groups or individually to work on their assignments, and/or type papers. On the side of the wall on your right as you entered the lab there were two blackboards, one covered with a big map of the world. The other board had what seemed to be notes for a class. On the same side, there were cabinets housing classroom texts, discs, and other supplies for lab. At the back of the room were three wide and long windows with white-colored shades. In general, the room was well lit both by overhead fixtures and windows; however, the shades on the windows were closed on the back of the room to prevent glare on the computer screens.

One general criticism of computer laboratory classrooms is that they are cold, insensitive places where students stare at computer screens all the time, and have no real communication with one another. In this lab, the atmosphere is very different. The physical environment, although crammed with hardware, sends a message that serious work is to be done here. For example, two small bulletin boards on one side of the wall contained the information needed for some of the courses offered at the English Language Institute, calendars, and suggested software for classes as well as URL's for useful Web sites for language learning.

During the spring 1999 semester, when the interviews for this study were conducted, the lab hours were from Monday to Friday, from 8:30a.m to 5:30p.m. However, there were times that the lab was reserved for workshops, in which case the students' access was restricted.

Figure 2

Photo of the Lab

As students entered the room, a clear routine seemed to have been established. Observing the students as they interacted with the Web site for practicing grammar over the course of six weeks gave me an opportunity to witness first hand some of the benefits and limitations of a Web-based environment.

The Interview Study Report

Emerging Categories

The eight participants specifically expressed thoughts or concerns relevant to various issues. The participants' interviews responses can be categorized into three major areas: Content issues such as content of Web sites and CD-ROM programs; technology issues such as internet experience and Web site interface; and learning processes such as the transfer of learned structures to other contexts e.g., composition, and reading, and suggestions.

Content Issues

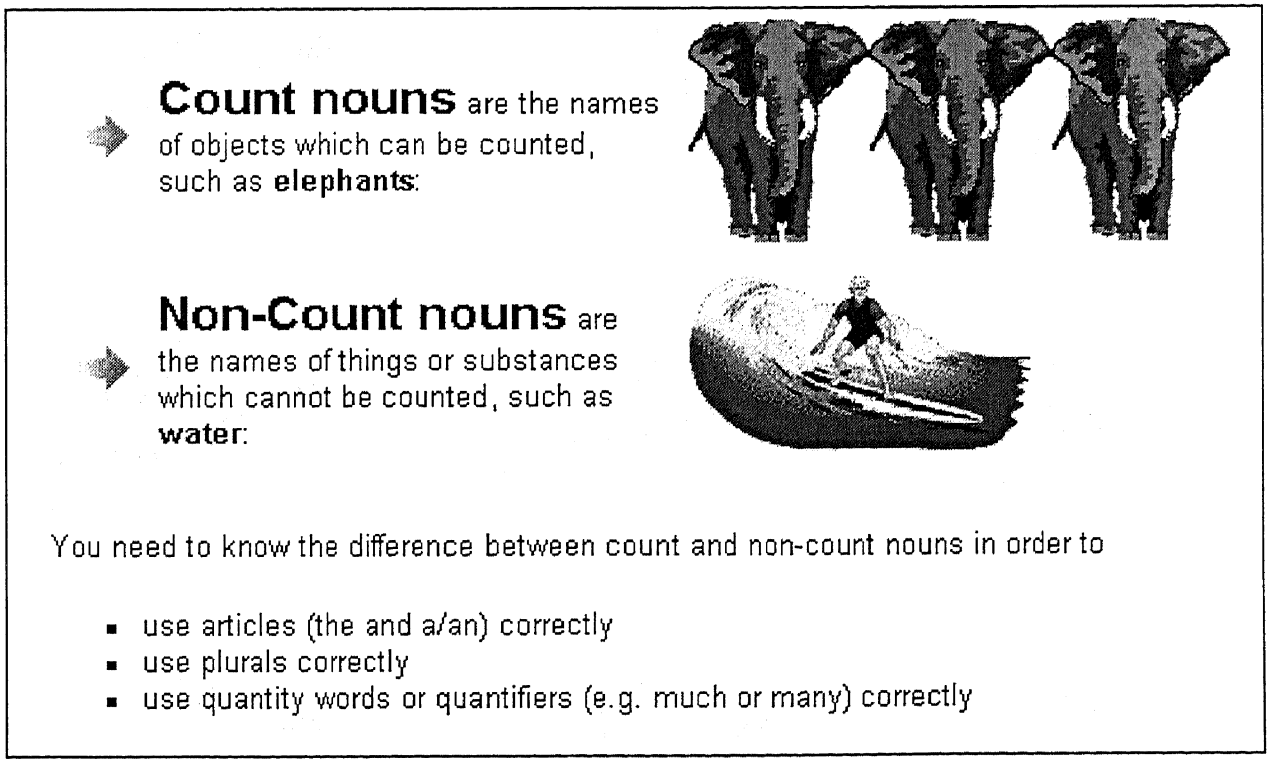
The participants made specific comments on the content related to the CD-ROM programs, the Web exercises, the textbook exercises, the feedback from the Web exercises and the ideal number of exercises.

Web-based content. The participants' satisfaction with the Web support content was openly expressed. Everybody had something to say about its quality. Khalid considered that the "Notes" section within NetGrammar was very beneficial (see Figure 3). He asserted that, "The notes on the Web are better than the ones in the textbook" (S1.7.1, P26). However, at the beginning he had some problem with the online exercises. "At first I did not know what to do with the exercises," he said, "There were no clear directions" (S1.8.1, P29). As I, the researcher, observed the participants in the lab, I realized that they were having problems with directions and navigation issues. Right after the observations were made, I made revisions to the program's navigation the same day. The participants were much happier about the changes and the navigation issue was never mentioned again.

According to José, "They [Web exercises] are an excellent way to learn and practice grammar," and then he added, " I decided to have more time to use the program" (S1.3.1, P14). He was satisfied that the Web had different ways to present the content. Many participants expressed that an effective way to learn grammar was with constant interaction with the program. For example, José said, "The more you can use NetGrammar, the more you can learn [grammar]" (S1.1.1, P9). He even went on to say, "In my case, I can speak or improve my writing using this tool. I think NetGrammar is very useful, and the success of the program depends on how often you use it" (S1.1.1, P9) and "you learn how to do it...without being conscious about the rules" (S1.2.1, P12). For Cindy the Web exercises were very useful. However, she expressed, "I'd like to see pictures and colors because it is more attractive if a student is bored he could be more motivated to do an exercise " (S1.5.1, P17).

Figure 3

Notes section in NetGrammar



As mentioned above, NetGrammar was created as a support for a traditional grammar classroom. It was developed on the Web to take advantage of its many capabilities such as 24-hour accessibility, interactivity, cross platform, etc.

Manolo asserted that the job of NetGrammar was "to help you get started in the use of English grammar" (S1.1.1, P9). He felt that the program contributed to his improvements in producing grammatical structures correctly. He said, " There is one thing that I would like to say...at the beginning of this semester I felt I knew all of the rules but I don't [sic] know how to put them in practice. I realize that NetGrammar has helped me. Now, I know the rules and I know how to use [them] in a very complex sentences" (S1.2.1, P12). According to Pablo, the Web program helped him a lot in practicing and learning grammar. He said, "I would have done much worse without NetGrammar. All those programs, the CD's and NetGrammar help you practice the new content" (S1.1.1, P9). He also expressed that, "Through the quizzes [in NetGrammar] I realize that I was learning. They [exercises] were a good way to teach and learn. That help you to see how well you are doing" (S1.2.1, P12). For Pablo, the Web site can even help learners pass a proficiency test when he expressed, " By doing the exercises and by studying with NetGrammar helped me to do better in the proficiency exam" (S1.2.1, P12). According to Oui,

> It is useful to have several resources available. If I wouldn't have the Web site, I would have to read from another book. It is more comfortable for me [talking about the Web resources]. So I think that the interaction with NetGrammar has increased the level of comprehension of grammar (S1.1.1, P8).

One of my concerns as I started developing the Web site was that the students would find the Web exercises repetitive from the ones in the textbook and

that they may lose interest. However, according to the participants those Web exercises had a different tone due to their interactive nature. Tomás expressed his feeling about the similarities of both the text and the Web exercises as following,

> When I see in the computer similar exercises that were given in class [textbook], to me, it is fantastic. The things that I am supposed to know are reinforced during the computer session and it is great. It is a good idea to find the same or similar exercises because it is a practice, in the first place (S1.4.1, P18).

In addition, for Tomás, "In the computer, the grammar points are reinforced" (S1.3.1, P15). And even though he liked working on the Internet very much, he sometimes had difficulties in understanding some of the exercises, especially at the beginning. He expressed, "sometimes it is confusing to understand everything about the computer and the instructions on how to use the program" (S1.2.1, P12). When he started using the Web site, he "did not find a clear explanation what to do once you finish an exercise...'now where am I going?'" (S1.2.1, P12). Despite all those hurdles, in the end Tomás felt different. He asserted, "You feel more free when you are with the Web-based exercises" (S1.4.1, P18). Besides, Tomás' level of assurance was increasing, and he felt good about his improvements in understanding grammar points. The following assertions summarizes this:

> You know what?!, when I find an exercise using the computer, I feel confident when I am alone next to the machine. It is a very important moment because I can go on my own pace, and I don't have the pressure from my teacher or other students to finish the sentence or exercise. I feel free to work (S1.5.1, P21).

Tomás did not feel he was used by the computer, instead he asserted, "I know that I am in control of the machine" (S1.6.1, P24). He also added, "by using NetGrammar I have learned a lot. Now I feel the confidence to talk more English, and now I can understand more structures. When I saw that I said. Wow!" (S1.1.1, P9). One issue that Tomás brought up was his preference to have a complete grammar course online. Although the original intent of NetGrammar has never been to be delivered as a stand-alone grammar course, for Tomás that would have been possible.

> I think that if I don't take classes and I take only NetGrammar I think it would be enough to learn grammar. It means that if I only took this course on the Web, and some type of test about what I studied, I think that it would be great because, let me tell you one thing, the elementary things that I have to learn about the course are, in one way, covered in NetGrammar so if I spend more time in front of the computer and I can avoid going to classes. The whole things that I am seeing in class are the same as the one in NetGrammar. I think that it is possible to improve the language that one person is learning with constant practice and the good thing is that you can have an ideal environment using the web because you don't have to wait for the next class or number of classes to study because you have the information in the computer. You can repeat the information over and over again according to your needs (S1.1.1, P9).

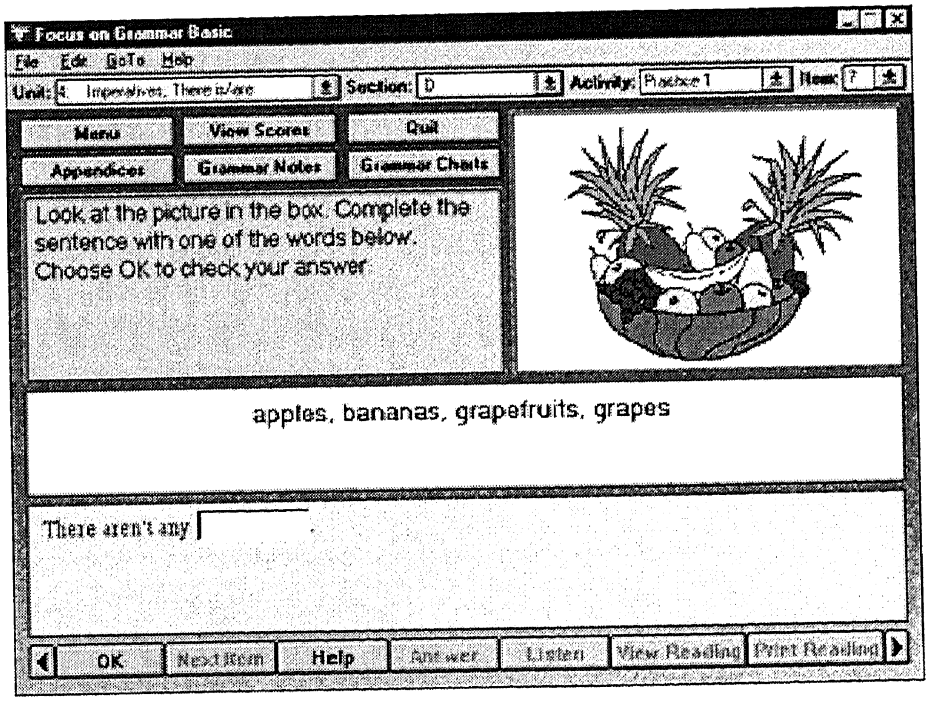
Even though Tomás thought he was a bad student of English, he asserted, "it [NetGrammar] increased my curiosity to be involved with the grammar of English" (S1.1.2, P12).

Overall, most of the participants did not have any major problems with the interface of the Web program. For Manolo understanding the program was an important issue. "When you read the instructions in the software, it is supposed to be simple enough for you to understand what you have to do" (S1.1.1, P9).

CD-ROM content. One of the required assignments of the grammar class was to go to the Computer lab and check two main ESL software grammar programs. One of them was Focus on Grammar (FOG), and the other was called Testmaster (see Figure 4). Both programs deal with intermediate grammar and provide extensive grammar practice through a great variety of reading, writing and listening activities (see Table 3). The software is suitable for self-directed learning and also as an extension to regular class work. It is also advertised to be suitable as a primer for TOEFL® and TOEIC® tests. As an alternative, the participants were given the option to choose NetGrammar instead of one of the two CD-ROM programs.

Figure 4

Focus On Grammar (FOG) screen shot



Khalid stated clearly that there was a marked difference in the presentation of the content in the support materials for the class. He noted,

> Maybe, the Web exercises have a lot of examples and different examples. There you can find easy, not so easy and hard exercises, but in Testmaster you find a lot of easy exercises and hard ones. The types of questions on the web are more advanced than in Testmaster. There is more variety of types of exercises on the Web (S1.4.1, P17).

José and Vladimir emphasized the fact that they found differences between the two CD-ROM programs and the one on the Web. "The CD-ROM and the Web exercises give you the opportunity to have interactive ways to learn the structures," José stated, "I think that Testmaster is more specific and useful, FOG has more advanced structures and the web exercises give you more activities. FOG and the Web exercises have more advanced exercises than Testmaster " (S1.4.1, P17).

While many of the participants found marked differences in the way the content was presented in the CD-ROMs, or the Web, Cindy found no such diversity. She felt that "They [textbook, CD and the Web] have similar types of exercises and they look almost the same" (S1.5.1, P17). "You have similar feedback in the lab [CD-ROMs] and the Web" (S1.6.1, P20), she added.

Contrary to other participants, Manolo found that "by using the Web exercises, you find simpler sentences or more basic structures than the ones in the CD-ROMs," nonetheless, "both complement each other" (S1.4.1, P17). Pablo also said, "Each one has its own exercises and its own format" (S1.4.1, P17).

Table 3

Summary of Participants' Comments on the Content in CD-ROM Programs

Participant	Response
Cindy	It is similar to the Web
José	It is very specific, It is useful
Khalid	It has lots of easy exercises, only on the lab
Manolo	It has complex structures
Oui	You can use it only at the lab
Pablo	It is complementary, It has good feedback functions, It helps you practice new content
Tomás	Similar exercises to the textbook, access is limited
Vladimir	Good interactivity

Textbook content. The differences between the class textbook versus the Web exercises and the CD-ROM's were brought up by many of the participants. The grammar textbook used for the classroom is called Grammar Workshop written by Chuck Seibel in 1998.

Most of the participants perceived the textbook exercises as simple and easy (see Table 4). Khalid considered that the textbook "has easy questions" (S1.4.1, P17) compared to the ones found on either the Web or the CD-ROM

programs. José was more expressive about the differences in support materials. He even mentioned differences between the two CD-ROM programs. "The textbook shows you the rules," (S1.4.1, P17) he stated.

In general there was the consensus that NetGrammar complemented the course materials as Jose said, "The explanations about the exercises found in NetGrammar are complementary to the ones found in the book" (S1.2.1, P12). It is interesting how different the participants perceived the degree of difficulty of the exercises. According to Manolo, "by using the Web exercises you find simpler sentences or more basic structures than the ones in the CD-ROMs. Both complement each other" (S1.4.1, P17).

Yet Oui considered the material in NetGrammar to be "more useful than the book for the class" (S1.1.1, P8). She found that "The information in the book is so simple that I found the information on the Web more complete" (S1.2.1, P12). Vladimir went on to assert the following:

> From my experience I can see that the exercises are different for sure...in the way the materials are presented. The textbook just gives you the basic rules but on the computer you have interactivity and the feedback is good (S1.4.1, P18). I really like it. There is nothing like that in the book (S1.5.1, P21).

According to Tomás, there was not much difference in the content of the different support materials. He seemed to like the idea of having similar exercises. "When I see in the computer similar exercises that were given in class," he said, "to me, it is fantastic" (S1.4.1, P18).

Table 4

Summary of Participants' Comments on the Content in the Textbook

Participant	Response
Cindy	It is similar to the Web and CD-ROMs
José	The textbook shows you the rules
Khalid	The book has easy questions
Oui	Exercises are easy, information is simple
Pablo	It is complementary
Tomás	Similar to Web exercises
Vladimir	The textbook just gives you the basic rules; it has poor feedback

Exercise feedback. All of the participants in this study had something to say about the automatic feedback from the exercises found in both the CD-ROM programs and NetGrammar. For the most part all of them found the feedback very useful (see Table 5). "I would like to see more corrections in the feedback. Testmaster give you hints," (S1.5.1, P.20) stated Khalid. He found that the quality of the feedback was not very good. "There are few corrections or explanations of why you got it wrong," (S1.5.1, P.20) he said. In the case of José the feedback was very useful. Indeed, he went on to say, "[The] feedback allows you to make

changes right away without having to wait for results after a test or the next day from the teacher" (S1.5.1, P20). He also noted "the explanations about the exercises found in NetGrammar are complementary to the ones found in the book" (S1.2.1, P12).

Table 5

Summary of Participants' Comments on the Exercise Feedback

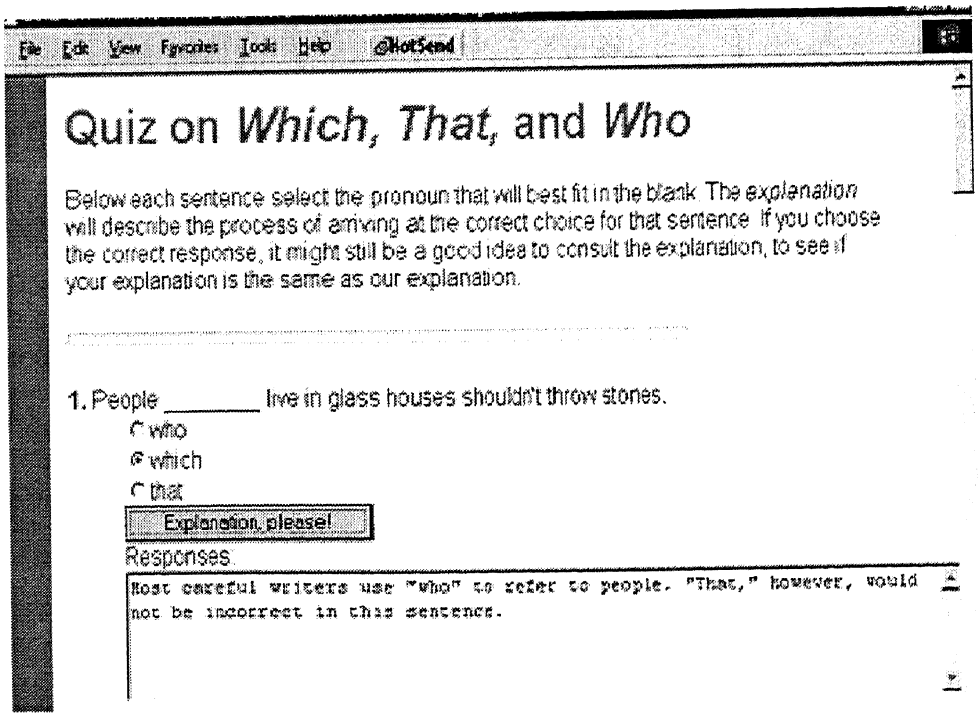
Participant	Response
Cindy	It is good
José	Interactive, very useful; allows you to make changes right away
Khalid	Few explanations; wants to see more correction, hints
Manolo	It is very good; it increases your motivation, and encourages you to keep going
Oui	It is very good; some exercises don't provide more explanations
Pablo	Good feedback functions
Tomás	I feel very well when I found 80% correct as feedback; Reinforcing, helpful,
Vladimir	It is good and interactive

Cindy, Manolo, Pablo, Vladimir, and Tomás referred to the feedback of the Web exercises as "very good", "very useful", or "very helpful." Manolo found that the feedback of the Web exercises could be a motivation factor.

> I think the feedback is very good. Sometimes, you may feel like very tired and if you receive from the computer a reward THAT helps you to increase your motivation and it encourage you to keep going. The web exercises are very organized. Every sentence has its own correction for the student (1.5.1, P20).

Yet Tomás added, "Sometimes I feel very well when I finish and I found 80% or 67% correct as feedback" (S1.6.1, P24). "It is a pretty good idea," stated Vladimir "to have that section [feedback]" (S1.7.1, P27). Figure 5 below shows an example of the type of feedback found in the exercises in NetGrammar.

Figure 5. Web-Exercise Feedback Screen shot



Number of exercises. Reactions were mixed with regard to the appropriate number of exercises that the participants came across in NetGrammar. There are 15 units, and each one has a certain number of hyperlinks to different types of exercises. Not only did the students have the chance to practice the exercises found within NetGrammar but they could also visit other grammar web sites.

Almost all the participants agreed that it was very good to have as many exercises as possible. Cindy felt that "the more exercises the better, the more you can do the more you can learn" (S1.9.1, P29). "It is a good thing to have as many exercises as possible," (1.5.1, P17) she said. Khalid, Vladimir and Oui agreed that there were many exercises. However, the three of them were also pleased about it. "There are too many exercises but it is good because students can choose from a variety of examples," Khalid said. (S1.8.1, P29). "For one single topic," Vladimir said, "it is good to have as many exercises as possible" (S1.8.1, P30).

Pablo was happy about the number of exercises, however he felt he did not have the time to work on them. He stated, "It is good to have as many exercises as possible. The more the better but I need more time to use the Web efficiently" (S1.8.1, P29). Contrary to what everybody said, Tomás asserted, "I think that it would be a good idea to have few examples, around five exercises for each topic or structure. It would be less hard" (S1.8.1, P30).

Table 6

Summary of Participants' Comments on the Amount of Exercises

Participant	Response
Cindy	The more the better
José	The more the better
Khalid	There are too many, but that is all right
Manolo	No problem with the number of exercises
Oui	There are too many but that is not a bad idea
Pablo	Good idea to have as many as possible
Tomás	It is better to have fewer examples
Vladimir	There are too many, but it is good

Technology Issues

Another major category, which emerged from the data collected, dealt with technology issues. All participants, in one way or another, expressed their concern about how they use e-mail, their Internet experience, lack of computer skills, problems with the computer lab, and the look and feel of the Web site (Interface).

Internet experience. Some of the participants were really experienced in using the Web and the e-mail while others had never used e-mail until they arrived in the US (see table 6). One of the most experienced users was Khalid. He has used the Web and e-mail for three years. In the case of Vladimir, his experience with the new technologies had been very limited. "I'm not very familiar with the Internet," (S1.2.1, P12) he said. When Cindy talked about her experience with the Internet, she said, "I've used it a lot in my country for a year or so to send messages to friends abroad, or searching info for school assignments" (S1.3.1, P11).

Manolo and Pablo had never heard about the Internet or e-mail until they got to the U.S. Manolo stated, "The Internet is something new for me. When I was in my city I didn't have any knowledge of the Internet. Now I know how to use it. I know to use chats, e-mail" (S1.2.1, P11). Pablo also stated,

> Before I came to Lawrence I did not have any experience with the Internet. But now I can use it a little bit. I use email to write to friends here in the United States. I usually write in [my own language] most of the time. I don't use the Web very much, but now I am using it for the grammar class, at least three times a week (S1.2.1, P11).

Oui did not have much experience either. "I don't have much experience with the Internet," she said, "I just use email to write to my friends" (S1.2.1, P11). Tomás

explained that because he had been in graduate school for two years, he had used the Internet a lot. "I use the e-mail every day. I use email to communicate with people in Mexico, the United States, and I have to read e-mail because I receive important messages from the Spanish Department, about professors or class assignments," (S1.2.1, P12) he stated.

Table 7

Summary of Participants' Comments on Internet Use

Participant	Response
Cindy	I've used the Internet a lot for sending messages, searching information for school assignments
José	I started using the web once we were assigned the Web exercises
Khalid	I've used the Internet for about three years
Manolo	It is something new to me
Oui	I just use e-mail to write to friends; I don't have much experience
Pablo	I use e-mail to write to friends; now I use the Web to learn English
Tomás	I use the Internet to write to friends; do school assignments.
Vladimir	I am not very familiar with the Internet

CALL lab. One of the most severe complaints about using the CD-ROM programs was that the participants found the computer lab hours to be a constraint to practicing grammar. Even though the lab was open from 8:30a.m. to 5:00p.m., Monday through Friday, there were other activities such as training sessions, presentations, etc. It is important to note that this computer lab was the only one the participants had access to in order to practice from the CD-ROM programs. "Testmaster, you can only use at the lab," (S1.6.1, P23) asserted Khalid. You could see his facial expression showing frustration. When José talked about the availability of the Internet 24 hours a day, he stated that it was "Something you can't do at the Lab because of schedule restrictions" (S1.6.1, P23). All of the participants mentioned their disappointment about the accessibility to the computer lab. One of the problems according to Oui was the fact that there were "few computer [sic] for many students" (S1.4.1, P17). Another limitation was that printing in the lab was very constrained. "In the lab you can only print the required exercises," stated Tomás, "whereas with the Internet you can be anywhere and print what you want" (S1.4.1, P18). Another limitation of CD-ROM programs was the fact that many of them did not give the user the chance to print the materials or exercises.

Most of the participants also voiced their concern about the necessity to have training sessions on how to use the Internet resources for language learning. "In the first week of classes," stated Khalid, "It is more useful to get more direction on how to use the web exercises" (S1.6.1, P23). According to José "training is very necessary because many people don't have the computer skills" (S1.9.1, P32). Khalid could not agree more on that issue. "I think that it may be hard for some

students who lack the computer skills," (S1.6.1, P23) expressed Khalid. Pablo and Vladimir also agreed with José and Khalid. "It is important to give a workshop at the beginning of the semester" (S1.9.1, P32), stated Pablo. In the case of Vladimir, he said, "My typing skills are not very good, so I prefer to have exercises that the only thing you have to do is clicking or just writing a word or two" (S1.4.1, P18).

Table 8

Summary of Participants' Comments on the computer lab

Participant	Response
Cindy	Inconvenient for some students
José	Training is necessary for people who don't have computer skills; schedule constraints
Khalid	Hard for students who lack computer skills; lab hour constraints
Manolo	Lab schedule limitation
Oui	Few computers for many students
Pablo	Lab schedule limitations
Tomás	Restricted access, must follow rules; can only print certain assignments; don't feel free to work
Vladimir	We need more computer training

Web site interface. Almost all of the participants mentioned something about the user interface of NetGrammar. Khalid, for example, expressed, "I think that the look of the Web exercises are good, better than the look of Testmaster [CD-ROM]. You just have the questions and the answer " (S1.4.1, P.17). José referred to NetGrammar as "a very attractive way to learn grammar because you have many features such as pictures, sounds different from Testmaster, and it makes very attractive to students" (S1.1.1, P9). He also expressed that, "the look of NetGrammar is good and very user friendly" (S1.9.1, P32). On the same line, Pablo thought that "The look of NetGrammar is important because I get motivated, it is inspiring to see pictures and interactivity" (S1.9.1, P32). Finally, even though Vladimir expressed his concern about the content rather than the look of the program. He went on to state, "I like the format and the environment of the Grammar course on the Web," (S1.6.1, P24), however, "To me, I think the look [of NetGrammar] is OK. It is not important to me the colors or the look but the content" (S1.9.1, P33).

Learning Process

Fundamentally, we, as instructors want to use technology to supplement what we do in the classroom and to help in doing what we cannot do very well now (share multimedia, collaborate long distance, make authentic materials comprehensible). But we also want to use the technology to help us experiment with approaches we had never thought of before.

In this section, three major sub categories that emerged from the data will be described. The first one deals with how the participants use the Web for practicing grammar (strategies). This is actually one of the research questions that

this study addressed. The second sub-category deals with the transfer of grammar knowledge to other contexts. The third accounts for the perceived advantages and disadvantages of a Web-based grammar program and some suggestions made by the participants.

Strategies used on the Web. Most of the participants developed their own strategy to work on NetGrammar. However, all of them followed the same pattern. That is, all of them work on the web exercises either directly on the computer or by just having a printout of the exercises. "I use the Web at home," said Khalid, "I just answer the questions directly from the computer. I check the notes and if I found something important I write it down" (S1.7.1, P26). José, who would go to the lab once a week, also liked to print the exercises. He felt he needed to have something to look at all times. José answered briefly to the question on how he used NetGrammar: "I just follow the order of what is in the web page, step by step. I do one exercise after the other" (S1.7.1, P26). In like manner, Cindy stated, "I like to print the exercises and the answers to compare how I do. Other times I just do the exercises directly on the computer" (S1.8.1, P28). Manolo expressed similar thoughts as the rest of the participants. He commented:

> I usually start from the web pages [NetGrammar]. After that, I review some grammatical topics [in the textbook] and after that, I feel more confident to go to other programs such as Testmaster, FOG. That's the way I use the three (S1.4.1, P17).

Manolo had another strategy when he encountered a statement or exercises that he could not understand. "I usually start from the beginning to the end... in order [in going about the Web exercises]," he stated, "But if I don't understand the sense of the sentences, I write the sentences in my notebook, then at home I review my

notes in class to verify the type of structures" (S1.7.1, P26). Tomás further explained his experience in using NetGrammar. "[Y]ou have to go step by step...little by little. You have to start from the beginning," (S1.1.1, P9) he stated. Pablo also added that he preferred "to print out information with the Web" (S1.4.1, P17). Pablo described in detail the way he approached NetGrammar:

> I go to the Lab and open the browser to connect to the Web exercises. Sometimes I choose from the many exercises, other times, I just follow one by one. And what I like the most is that I can print the notes or the exercises. This is something that I can't do with Testmaster. I usually print out the notes. Well, I prefer to read the questions first. Which ones the exercises are. Then I choose the different types of exercises. The Notes was a very good part of NetGrammar because the students can print notes about the structures. I printed some notes and that helped me a lot. Some notes were similar to the ones in the classroom textbook but others were different (S1.7.1, P26).

Oui explained her own way to work on NetGrammar. "I think [that] if I can print the Web pages and study from it, is better for me," she stated, "then I go to the Web to check answers" (S1.3.1, P14). Oui also said, "If I have time I just do the exercises directly on the Web, but if I don't have time, I just print out the exercises" (S1.7.1, P26).

Table 9

Summary of Participants' Comments on Strategies on the Web

Participant	Response
Cindy	I like to print the exercises and the answers; other times I just do the exercises on the computer
José	I follow the order of the exercises; step by step; I print the exercises
Khalid	I answer the question directly from the computer; I check the Notes, I take notes
Manolo	I go in order; take notes; review notes
Oui	I do the exercises on the computer; other times I print out the exercises
Pablo	Sometimes I just follow one exercise right after the other, other times I pick certain exercises; print Notes and exercises
Tomás	I do the exercises on the computer; no pressure; print exercises and Notes
Vladimir	I click on the right answer and print it. Then go to the Web and compare it with the printout

Tomás explained how he used the Internet. He said:

> Well, I use it when I have to find one important topic about my studies, or when I want to read news about my country. You know here it is difficult to find information about the politics of my country or life in Mexico. And [I use it] when I need to find one information about any writer or topic about literature. Now I am starting to use the Internet for learning English (S1.2.1, P12).

Tomás also added that he preferred having a print out of the exercises on the web. "I enjoyed very much to get a piece of paper with the tenses that I was learning, so for me it was very good to use NetGrammar," he asserted, "anytime that I wanted, I can check on the printouts and it is an advantage for me" (S1.1.2, P112). Vladimir stressed the fact that because of his weakness in typing, he preferred also to have printouts. "I like to have printouts because I can carry them with me all the time," (S1.7.1, P27) he stated. He further explained how he went about using the Web exercises:

> When I feel like I cannot remember something. I click on the right answer, and after the computer gives me the correct answers, I print the exercises. Then I go to the exercises again on the web and as I click on the correct option, I check on the right answer in paper (S1.7.1, P27).

Vladimir emphasized the importance of interactivity and flexibility he found on the Web.

Applying Knowledge. One important aspect in learning is the ability to transfer what you have learned to other situations. Many of the participants, in one way or another, felt that the interaction with NetGrammar helped them improve their proficiency of English. It is worth noting that all the participants in this study passed not only the grammar course, but also the proficiency exam.

José felt that his interaction with the web-based exercises helped him do better in other skills. He stated, "You can apply what you learn on the web directly to you reading and writing skills" (S1.1.1, P9). However, he saw the transition to apply the rules to other situations as very difficult. "It is difficult to be fully aware of the transferability of the grammar knowledge," he noted, "but my performance

during the semester has been stable" (S1.2.1, P12). José has also seen improvements as a consequence of his interaction with the web-based material. "I have seen a difference in writing," he said, "I expect to increase in my performance in writing, I feel more fluent in reading and writing, too" (S1.2.1, P12).

Manolo explained that the Web exercises were a key factor to do better not only in grammar but also in reading and writing. "It [the Web] helps you to improve your grammar, reading, vocabulary," (S1.3.1, P14) he noted. Manolo emphasized the fact that both the Web materials and the CD-ROM programs facilitated his vocabulary growth. "I can improve my vocabulary using that kind of tools," (S1.6.1, P23) he said. He also added,

> I realize that when I write essays I feel more confident, and I can develop strong ideas in order to find a good conclusion of the statements. I feel THAT [emphasis on that] because of the interaction with NetGrammar. My teacher of composition noticed that I have improved. I became a better writer (S1.1.1, P9).

Pablo believed that by using NetGrammar he was able to improve his speaking and writing skills. "By doing the exercises, and by studying with NeGrammar helped me to do better in the proficiency exam," (S1.2.1, P12) he stated. He also noted that by working on the exercises, he was able to do better in his writing. He stated,

> If you practice with NetGrammar, it will help you with grammar, vocabulary, skills for writing. Through the quizzes I realize that I was learning. When you are doing exercises, or vocabulary, at the same time you are learning how to write a good sentence (S1.2.1, P12).

Oui also felt that the Web exercises helped her. "I think that the interaction with NetGrammar has increased the level of comprehension of grammar," She said. However, she has struggled to apply what she learned to other situations. "For me it is difficult to transfer the structures I learn in class, and applied it to other contexts" (S1.2.1, P12). Tomás expressed, "in conversing with my friends I have noticed that by using NetGrammar I have learned a lot; now I feel the confidence to talk more English, and now I can understand more structures" (S1.1.1, P9).

Other minor sub-category that emerged from the data dealt with the lack of quality time to work on the exercises. Most of the participants were taking 16 credit hours. Some of the participants were taking, along with Grammar III, Reading and Writing, and Listening comprehension courses. Others were taking Speaking and Understanding. Manolo asserted, "The number of tasks for several courses overwhelms us. We have 16 hours of work weekly" (S1.1.6, P23). In like manner, Pablo said, "I need more time to use the web efficiently" (S1.8.1, P29). "I don't have time to go over every exercise, " (S1.8.1, P30) complained Vladimir.

Table 10

Summary of Participants' Comments on applying what they learn to other situations

Participant	Response
José	You can transfer what you learn on the Web to improve your reading and writing skills. It is very difficult though.
Manolo	The Web helps you to improve your grammar, reading, and vocabulary; I realize that when I write essays I feel more confident.
Oui	It is difficult to transfer the structures I learn in class, and applied it to other contexts.
Pablo	Able to do better in his writing (composition); you learn how to write a good sentence
Tomás	Now I feel the confidence to talk more English, and I can understand more structures

Web Support: strong and weak points. Another major sub-category that emerged from the data related to the perceived advantages and disadvantages of the Web-based grammar program. All the participants expressed very positive comments about the exercises found on the Web. Most of them agreed that one main advantage of the Web material was its 24-hour availability.

Khalid felt that on the Web "You can get information fast and easily" (S1.3.1, P14). He also expressed that "There is more variety of types of exercises on the Web" (S1.6.1, P23). "The advantage of NetGrammar is that you can use it anytime, anywhere," (S1.5.1, P20) said José, "it is available all the time" (S1.6.1,

P23). He also thought that Web-based materials "give you more alternatives" (S1.6.1, P23). For José having a computer at home facilitates the practicing of grammar exercises. "If you have a computer at home, your possibilities to practice grammar increase a lot," (S1.1.1, P9) he said.

Another major perceived advantage of the Web is the fact that the participants felt that they did not have to spend extra money in other textbooks. Cindy openly expressed, "Yes, they [web exercises] are very useful. For example, you don't have to buy books, [just] do the exercises on the web. You can work on the exercises everyday, at any time, anywhere" (S1.4.1, P14). By the same token, Pablo was happy to go to any of the several labs he has access to in order to practice on the Web. He asserted, in a joyful manner, "I don't have to spend money on books" (S1.3.1, P14). He went on to say, "Students have more opportunities to do more practices, different exercises anywhere, not only in the Lab" (S1.6.1, P23).

Manolo expressed that the materials found on the Web motivated him a lot. "[I]t encourage you to keep going," (S1.5.1, P20) he stated. Similarly, Pablo stated, "I get motivated, it is inspiring to see pictures and interactivity" (S1.9.1, P32). Oui felt that by using the Web support she did not have to leave home as often. "It is more comfortable for me," (S1.1.1, P8) she said. It was also important for Oui to find other links that refer to the grammar points. "I found the information on the Web more complete," (S1.2.1, P12) she said.

Table 11

Summary of Participants' Perceived Advantages of the Web

Participant	Response
Cindy	You can practice grammar anywhere; It is a good thing to have as many exercises as possible
José	Interactive ways to learn grammar; presents content in different ways; you have more alternatives; you can use it anytime, anywhere
Khalid	Lots of different and varied exercises; you can use it anytime, anywhere
Manolo	I can improve my vocabulary, reading, and grammar skills; interactive feedback, too many exercises
Oui	There are more opportunities to practice grammatical structures; information more complete; too many exercises
Pablo	More opportunities to practice different exercises anywhere, anytime not only on the lab; interactivity; can print
Tomás	No pressure from the teacher, self-pacing; you feel free to work
Vladimir	Web support is a good idea; I am pretty sure it will help us a lot; too many exercises

Table 12

Summary of Participants' Perceived Disadvantages of the Web

Participant	Response
Cindy	inconvenient to students who don't have a computer at home
Khalid	There were no clear directions at times
Manolo	There are too many exercises
Oui	There are too many exercises; sometimes it is confusing to understand everything about the computer and the instructions on how to use the program.
Vladimir	There are too many exercises; I don't have time to go over every exercise

Tomás found that by using the web he was in charge of what to do and how to do things. "[W]ith the Internet, I have found I don't feel the obligation to follow one exercise." He said, "You feel more free when you are with the Web exercises" (S1.4.1, P18). He also emphasized the fact that "with the Internet you can be anywhere and print what you want" (S1.4.1, P18). He also felt that he could work on his own pace and felt free to work on whatever he wanted.

Even though most of the comments on the use of Web-based materials for practicing grammar were positive, there were a few comments that concerned the participants. Khalid found that he needed more directions on how to do the exercises on the web. He wanted to see "explanations of why you got it wrong"

(1.5.1, P20). Tomás also expressed his concern with the type of guidance he needed to work on the Web. He noted,

> But most important is that there should be clearer instructions in each link or exercise. For example, I recommend that in three minutes, you should finish this exercise. I need some kind of guidance on timing to finish (S1.6.1, P24).

On the other hand, José thought that more training was needed specially if the users did not have the computer skills to work effectively. Cindy was concerned that even though the Web exercises could be practiced anywhere, it would be "inconvenient for some students who don't have a computer at home" (S1.7.1, P23). Oui found that one major disadvantage of Web-based support was the lack of face-to-face communication. "I would need to use the information in many contexts, and with more people involved, " (S1.2.1, P12) she said.

Suggestions. The participants made several suggestions that should be taken into consideration. Khalid suggested adding a new feature to NetGrammar. "I think there should be a test at the end of each unit, a kind of review quiz," (S1.9.1, P32) he said. Cindy and Manolo wanted to see more pictures and colors. It would be "more motivated to do an exercise," (S 1.5.1, P17) Cindy stated. Cindy also noted, "I think that there should be a proficiency test for students to practice on the Web" (S1.10.1, P32). Manolo wanted more reading exercises. "The only thing that I suggest," he said, "is to present; give us, for example useful information, a piece of reading where you have to complete according to the information and more fill-in the- blanks" (S1.3.1, P17). Finally Manolo felt there was more interactivity. "You can have short fables with animations to catch the

students' attention," he said, "Not only the students learn grammar but also the students will learn from real materials" (S1.9.1, P33).

Table 13

Summary of Participants' Emergent Categories

Categories	Informants ()* Number of times category was mentioned
Web based content	Cindy (3), José (7), Kahlid (3), Manolo (6), Oui (8), Pablo (9), Tomás (7), Vladimir (2)
CD-ROM content	Cindy (2), José (1), Kahlid (3), Manolo (2), Oui (3), Pablo (3), Tomás (2), Vladimir (1)
Textbook content	Cindy (1), José (3), Kahlid (3), Oui (4), Pablo (2), Tomás (2), Vladimir (1)
Exercise feedback	Cindy (3), José (3), Kahlid (4), Manolo (3), Oui (5), Pablo (2), Tomás (4), Vladimir (3)
Number of Exercises	Cindy (2), José (3), Kahlid (3), Manolo (1), Oui (4), Pablo (1), Tomás (3), Vladimir (2)
Internet Experience	Cindy (3), José (1), Kahlid (3), Manolo (2), Oui (3), Pablo (1), Tomás (3), Vladimir (2)
CALL lab	Cindy (1), José (2), Kahlid (1), Manolo (2), Oui (1), Pablo (3), Tomás (1), Vladimir (2)
Web site Interface	Cindy (1), José (1), Kahlid (2), Manolo (1), Oui (1), Pablo (2), Tomás (1), Vladimir (2)
Strategies	Cindy (3), José (3), Kahlid (3), Manolo (3), Oui (4), Pablo (3), Tomás (2), Vladimir (2)
Applying Knowledge	José (3), Manolo (2), Oui (3), Pablo (3), Tomás (3)
Web adv/disadv	Cindy (3), José (4), Kahlid (5), Manolo (4), Oui (5), Pablo (3), Tomás (3), Vladimir (3)

Conclusion

Specific categories recurred across the participants. As the study unfolded, I began to realize that the participants' experience with the Web-based materials was very similar. All of them complained about the computer lab, especially its hours open to the public and the fact that they had to be there in order to use the CD-ROM programs. The limitation of printing out material was another complaint. It was interesting to note that almost everybody seemed to attribute NetGrammar the success of his or her English language improvements.

In this chapter, the basic and major characteristics of the eight participants' responses to each of the interview protocols were given. The presentation of data used both direct quotations and tables with summarized information.

In Chapter Five, the data presented in Chapter Four is discussed. As a result of data analysis, a model was constructed on the basis of the data. The purpose of formulating a model was to give an account of the participants' thoughts and actions from their point of view. The major findings, the implications for future research, and concluding remarks will be covered.

CHAPTER FIVE
FINDINGS, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this chapter is to relate the lessons learned from the interview study presented in Chapter IV to the literature review. A model based on the data collected will be formulated and implications for practice and research will be displayed.

This study proposed to describe and explain the perspectives of eight ESL students on the use of a Web-enhanced grammar course as a supplementary environment for practicing and learning English grammar. The research questions that guided the study were:

1. In what ways do ESL students use the Internet resources found in the Web site NetGrammar for enhancing the learning of English grammatical structures?

2. What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?

3. What are the students' perspectives on the interactive Web exercises for practicing English grammar?

Since the goal of qualitative data analysis is to identify emerging categories or patterns and to derive insights from the data itself, the data reduction, data display, and verification techniques were applied. Throughout the data analysis, the researcher used constant comparative method of analysis, which involved: 1) comparing incidents applicable to each category, 2) integrating categories and their properties, and 4) writing the study report.

In the final stage of data analysis, I studied the organized data to decide what issues had emerged. Through constant searching, re-examining the data and re-questioning meanings, conclusions were drawn and recommendations were made. The interview data for the study was transcribed verbatim without any attempt to alter or correct what the participants said. Since the participants' English proficiency level varied from low intermediate to high intermediate, many answers or responses contained grammatical mistakes.

Study Findings

Research Question 1
In what ways do ESL students use the Internet resources for enhancing the learning of English grammatical structures?

This is the major exploratory question. Based on the perspectives of the participants, it was clear that there were various strategies the participants used to practice and learn grammar on the Web. All eight participants used the Web in similar ways. Each one of them practiced the grammar exercises directly on the computer and/or had printouts of the Web exercises.

Printing. The advantage of working directly on the computer was that they had access to a dozen of exercises per unit. While the participants were in the CALL computer lab, they were unable to print these exercises because they were not required for the class. In order to print the exercises, they had to either be at their home computers with access to the Internet, or go to any of the other computer labs available on campus. Some of the participants would print out the Web exercises, work them out on paper, and then they would go back to the computer and wait for the immediate feedback to check if they had gotten the answers correct. The following quotes summarized the printing theme:

"I usually print out the Notes section;"
"I think [that] if I can print the Web pages and study from it, is better for me, then I go to the Web to check answers"

Home access. Most of the participants enjoyed the idea of accessing the Web exercises from their homes and the flexibility to go to any computer lab on campus. As one of the participants said, "on the Internet I can be at home." As Bradin (1999) notes, "Learners often appreciate the added security of being able to take home a printed copy of the material viewed on screen" (p. 169). Most of the participants had a hard copy of the Web exercises and notes and used them for further review and reinforcement.

Efficient Use of Resources. Another interesting finding was that most of the participants checked their class notes or their grammar textbook when they would not do very well in the Web exercises. Thus, they used all the resources available to them in order to find answers to their grammar problems. In other words, when they would not find extensive feedback or suggestions on the Web, the majority of the participants jotted down the problematic structure, and revised their class notes to learn about their deficiencies. After that, they would go back to the Web exercises and repeat the exercises until they got them right. The following quotes summarizes this theme:

"I usually start from the Web pages [NetGrammar]. After that, I review some grammatical topics [in the textbook] and then I feel more confident to go to other programs such as Testmaster, FOG. That's the way I use the three"

Linear approach to Web browsing. Even though the flexibility of the Web allowed the participants to move in all directions and not follow a linear fashion of looking at things, many of the participants preferred to work on the exercises in the

order the exercises appeared. They started with the first exercise and went on until they got to the last exercise. This is an issue of learning styles or preferences on the part of some of the participants. In this case, they did not take advantage of hypermedia with links letting them jump from one medium to another, and from one topic to a related one. The following quotes summarize the linear approach to Web browsing:

> "Sometimes I choose from the many exercises, other times, I just follow one by one. And what I like the most is that I can print the notes or the exercises." "I just follow the order of what is in the web page, step by step. I do one exercise after the other"

Note taking. Most of the participants also took notes from the Web exercises and even wrote them down. As it was mentioned above, NetGrammar had a feature called "Notes" and many of the Web links, within the program, had informative and colorful grammar notes, which appeared useful to the participants. They used those notes from the Web to help them study for the quizzes and the final proficiency test. Some of the participants even e-mailed their results to the teacher. NetGrammar has the advantage of sending some of the exercise results and the writing practices to anyone via e-mail. The following quotes summarize the writing notes:

> "I use the Web at home. I just answer the questions directly from the computer. I check the Notes and if I found something important I write it down"

Most of the participants had a very positive attitude towards the Web exercises, and felt that those exercises helped them learn grammar. Interestingly enough, many of the participants noticed improvements not only in mastering grammar but also in reading and writing.

In one of the observation sessions, I could watch how two of the participants worked together in the computer lab. Each one had their own computer, and from time to time, they would exchange information and/or suggestions. One of them would point to the screen and tell the other what to do. When they received the percentage of their scores, they would share it with the other person.

Research Question 2:

What are the perceived advantages and disadvantages of Web-based support materials for learning English grammar?

It was important to find out what the advantages and disadvantages of using the Web were from the participants' viewpoint. The perception of the majority of participants towards the Web was consistent with other studies and/or the literature (Warschauer, 1996; Frizler, 1995).

Perceived Advantages

Accessibility. One of the advantages of the Web according to the majority of the participants is that you can get information fast and easy. You do not have to leave the Web environment to look for other related materials. Most of the participants specifically said that the availability of the information on the Web 24 hours a day makes it ideal and advantageous. They felt that they were not restricted to the four walls of the classroom. The following quotes summarize this theme:

> "You can get information fast and easily"
> "The advantage of NetGrammar is that you can use it anytime, anywhere"

The accessibility finding supports Hanson-Smith's (1997) contention that,

> The Internet and its multimedia version, the World Wide Web, allow the instantaneous exchange of information both to and from archive sites and between and among individuals. Language learners may post messages to a bulletin board, which users may "drop by" to look at, or they may enter "live" chat areas where communication is simultaneous, as if one were "talking" by typing. A number of sites now exist specifically crated for ESL learners (and for learners of other languages as well) to exchange ideas on topics of interest to them (p. 8).

As Healey (1999) states, "the increase of on-line resources accessible from home has made autonomous learning more feasible in many cases by removing time- and location-related constraints on access to technology" (p. 401).

Inexpensive resources. Many participants expressed that the advantage of using the Web was the fact that they did not have to spend extra money on more books, or workbooks for practice. This is important since many of these international students had limited budgets. As one of the participants expressed "you don't have to buy books, [just] do the exercises on the Web."

Intrinsic/Extrinsic Motivation. Because of its interactivity, the Web motivated the majority of the participants to continue working on the exercises. The variation in the format of the exercises encouraged the participants to actually do as many exercises as they wanted. The following quotes summarize this theme:

> "The materials [on NetGrammar] are motivating;" "I'd like to see pictures and colors because it is more attractive; if a student is bored he could be more motivated to do an exercise;" "The look of NetGrammar is important because I get motivated, it is inspiring to see pictures and interactivity;" "it [NetGrammar] increased my curiosity to be involved with the grammar of English."

Pressure-free and self-pacing. The majority of the participants found that they did not have to wait for anybody to tell them whether what they did was right or wrong. There was immediate feedback on every exercise with suggestions, hints, and reference to other materials in order to improve their knowledge on specific grammar points. Their self-esteem went up, and the participants felt they were in control of the exercises. Since there were a variety of exercises and Web sites to choose from, the participants felt good that they were in control of how many exercises they had to do. They did not feel the pressure from anybody; they worked freely. The majority of the participants felt that studying English through computers allowed for self-pacing and individualization of their learning experience. This, too, is in agreement with Healey (1999) who argues that "most current computer software gives users full control over the pace of learning" (p.401). Thus, students can decide how often and for how long to work on a specific program. The following quotes summarize pressure-free and self-pacing:

> "You feel more free when you are with the Web;" "I feel confident when I am alone next to the machine. It is a very important moment because I can go on my own pace, and I don't have the pressure from my teacher or other students to finish the sentence or exercise. I feel free to work. "
> "in conversing with my friends I have noticed that by using NetGrammar I have learned a lot now I feel the confidence to talk more English and now I can understand more structures."

Transferability. It was also very interesting to find that for many of the participants, the use of the Web was perceived to help them transfer what they learned to other contexts such as reading, writing, and speaking. They felt that their interaction with the Web exercises improved their reading and writing skills. They seemed to make a connection between what they practiced on the Web and

how they wrote a composition. They felt more fluent in reading and writing. One of the advantages of working on the Web was that the participants came across many new words. They felt that their vocabulary had grown significantly. The majority expressed that by working on the web, they felt more confident. The following quotes summarize the transferability of what the participants learned:

> "I feel more confident to use grammatical sentences in the essays;" "By doing the exercises and by studying with NeGrammar helped me to do better in the proficiency exam;" "I feel more fluent in reading and writing, too;" "You can apply what you learn on the web directly to you reading and writing skills;" It [the Web] helps you to improve your grammar, reading, vocabulary."

Although computers could not be used as a substitute for classroom teachers, in some cases, particularly in grammar practice, some of the participants felt that the Web environment offered them more than what the traditional grammar class did.

Perceived Disadvantages

Hypermedia nature. On the other hand, one of the disadvantages of the Web according to the majority of participants was its chaotic format. That is, the hypermedia nature of jumping from one place to another made it difficult to track where things were. There was also the concern that there were not clear directions as to how to use the exercises. Many exercises needed clearer objectives and guidance. And they could easily be distracted from the targeted goal by jumping to other sites or topics. One of them expressed, "At first, I felt like lost. I did not know where to go or how to go back to where I started."

Access to Computers. Another inconvenience of using the Web was that there were students that did not have a computer at home or who did not have

easy access to computers. As one participants put it, "inconvenient to some students who don't have a computer at home."

Lack of training/computer skills. The majority of the participants in this study noted that lack of computer training might discourage students to use the computer and the Internet. All of them expressed the necessity to have workshop sessions at the beginning of the semester to show students how to take advantage of the many resources available. As one participant expressed, "I think that it may be hard for some students who lack the computer skills."

Asynchronous interaction. There were some participants who were concerned about the lack of face-to-face interaction on the Web. They felt that there should be more collaborative tasks on the computer, where two or more students had to interact with one another in order to complete an exercise. For example, one of the participants said, "I would need to use the information in many contexts, and with more people involved." And the majority also complained about the lack of time to work on the exercises. Since there were so many of them to work on, they felt overwhelmed. "I don't have time to go over every exercise," said one participant. Another participant expressed, "I need more time to use the web efficiently." Besides, we have to take into account that the majority of the participants had a load of 16 credits with plenty of personal and academic responsibilities to fulfill. One of the participants expressed, "The number of tasks for several courses overwhelms us. We have 16 hours of work weekly." Another participants complained, "I am taking Grammar III, reading and writing, listening comprehension. We have many things to do."

Research Question 3

What are the students' perspectives on the interactive exercises on the Web for practicing English grammar?

Levels of difficulty. Based on the perspectives of the majority of the participants, the different types of exercises found on the Web were very good and useful. The level of difficulty varied from exercise to exercise, which made it challenging and motivating. Most of the participants complained about the CD-ROM programs in that the exercises were either too easy or too difficult exercises. One of the participants expressed, "There is more variety of types of exercises on the web." Another said, "By using the web exercises you find simpler sentences or more basic structures than the ones in the CDROMs." Yet another participants asserted, "The level of difficulty [of exercises] is higher in the web or LEO than in class."

Interactivity. The majority of the participants found that the interactivity and ease of use of the Web exercises made them feel good about themselves. They did not feel frustrated to use the Web. As Healey (1999) expresses,

> For software the issue of barriers to learning generally centers on user-friendliness. Software that regularly crashes falls into the worst-case category, causing total loss of the learner's control over the activity...Software can set up barriers to learning when it is cumbersome to use, requiring unnecessary keystrokes, or memorization of obscure commands to accomplish basic tasks (p.400).

Feedback. One of the many features of the Web exercises that had an impact on the participants was its immediate feedback capability. All of the participants found the feedback useful and complete. The participants liked that

each sentence in the exercises had its own feedback. As some of the participants said, the feedback encouraged them to keep going. Many of the participants found the feedback to be complementary. Thus, the Web environment presented the participants with varied immediate feedback, a task an ESL teacher could not possibly perform with every single student in a class of 18 students or more. One of the participants expressed, "Sometimes I feel very well when I finish and I found 80% or 67% correct as feedback." Another one said, "They [feedback] are very good." As Hannafin and Peck (1988) note,

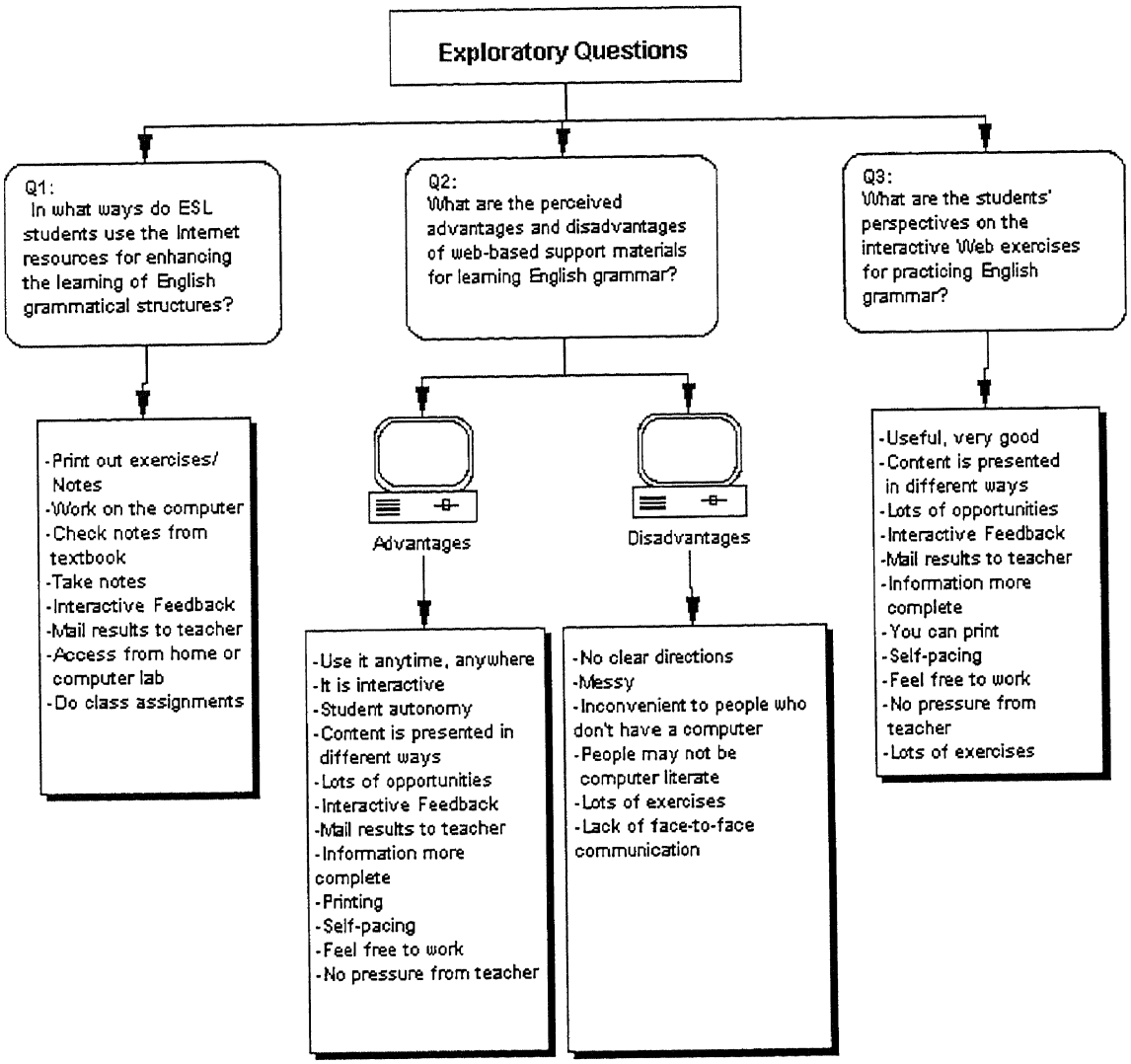
> The immediacy of the feedback provided by the computer is difficult if not impossible to replicate in other media. Most answers can be evaluated instantly. Others answers may take a few moments to analyze. In any case, the computer's ability to evaluate and respond surpasses by far the human instructor's ability to do so. This capability is a key factor in CAI's efficiency and effectiveness (pp. 9-10).

According to Soo & Boling (1999) feedback that "offers remediation (an explanation of why the learner was wrong) and reinforcement (an explanation of why the learner was right) is much more effective than simplistic "Good work!" or "Wrong, try again" messages" (p. 448). The explanations should always be in simple language understandable and appropriate to the level of the user. The following quote summarizes what most of the participants felt about the interactive exercises on the Web:

> For me, NetGrammar has had a solid effect. What I want to say is that you don't realize how much you have learn until things are over. I have been making progress..from the beginning until now the results are amazing.. they tripled. I realize that NetGrammar has helped me. I know the rules and I know how to use in a very complex sentences. My teacher of composition noticed that I have improved. I became a better writer...I could write more details without many mistakes.

Figure 6

Major components within the Framework of the Exploratory Questions



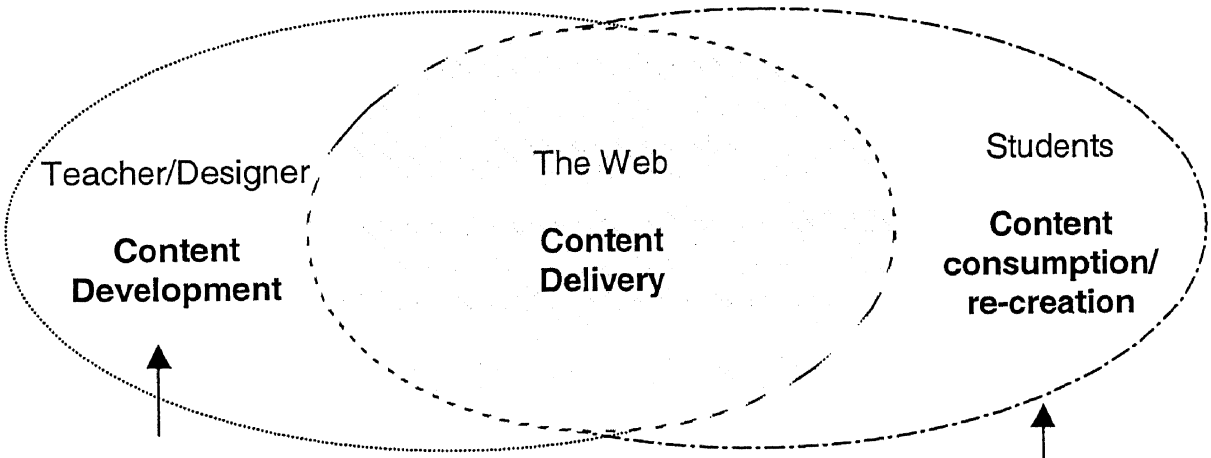
Development of a Model

To describe the experience of the ESL participants as they interacted with the Web-basd program NetGrammar, a model, "Web-enhanced course Development" (see Figure 6), was developed. Each component of the model was derived from the major categories that emerged from the interview data and from the observations and my experience as a Web developer and ESL teacher. The

model was an attempt to establish linkages and relationships of how the participants construed their world of experiences from the way they described it. The model explained below presents a synopsis of the potential of using the Web as a supplement of the traditional classroom and as a new learning and teaching environment.

Figure 7

A Model for an ESL Web-enhanced course Development



-Prepares software/Web pages for intended audience
-Determines objectives
-Selects materials
-Monitors progress
-Prepares needs assessement
-Present grammar: Form, Meaning, Use
-Selects textbook
-Supervises CALL lab
-Provide Training or Workshops
-Provides ongoing evaluation

-Presents material as authentic as possible
-Assesses progress
-Accomodates individuals' different learning styles
-Displays feedback
-Elicits students response
-Demonstrates results of students action
-Is tied to learner's reality
-Is Flexible/nonlinear
-Provides no time and/or place limitations
-Uses sound, pictures, movies, colors, animation
-Links to other resources
-24 hour availability

-Refer to external resources if needed
-Respond to feedback
-Control pace of presentation
-Interact with computer and peers through e-mail
-Active participation
-Are highly motivated
-Do not feel pressure
-can work freely

The development of this model was the result of the following factors:

Teacher's/Designer's content development. Based on my experience as Web developer of the Web site NetGrammar and as an ESL teacher, it is important to note that the traditional role of the teacher changes dramatically. It is a facilitator both in the classroom and in the CALL lab. The active participation in preparing and organizing the Web materials makes the instructor more aware of the selection of all kinds of exercises (mechanical, communicative, etc). The Web design must be pedagogical sound.

Web environment (content delivery). This new environment--The Web--makes it ideal for language learning. You can find authentic materials and specific content to suit the learners' needs. By using the Web, students can find accurate and recent information tied to their reality. Students can have access to it 24 hour a day. Due to its multimedia capabilities, the Web is very good for language learning, where sound, animations makes the delivery of content to be very high-quality. One important aspect of this new learning environment is that it can accommodate individuals' learning styles.

Students/Active participants (content consumption). Drawing on the experience from the participants of this study, it was clear that they extracted meaning transmitted through the Web sites they visited. Students were able to seek outside information related to the subject matter easily due to the nonlinear nature of the Web, with its many links and resources. One key aspect was the fact that the students were in control of their learning and they could work on their own pace. They did not feel the teacher or peers' pressure to do the exercises. Finally, the learners had the possibilities to work or interact with the computer (interactive

exercises) as well as with other students e.g., through e-mail.

According to Morrison, Ross, & O'Dell, (1995) in order to create an efficient and effective learning environment, the designer should emphasize a user-friendly screen design.

> First, a screen should have orienting information (e.g., how many frames or questions remain). Second, the screen should display directions for the learner in a consistent location. Third, the program should echo or display the students' responses. Fourth, a display area for informative error messages should be provided. Fifth, the options available to the student (e.g., quit, review, go to the previous screen) should be displayed in a consistent are. Haines' approach provides the designer with guidelines for developing a consistent user interface that increases the user friendliness of the software (Morrison, Ross, & O'Dell, p. 216).

One key aspect in the development of the Web site program was that even though it contained fixed content, the participants were able to choose their preferred methods of grammar study and practice by navigating a list of the units or the table of contents that served as the main menu. It is important to note that I took advantage of teacher-made Web sites in order to expose the participants to a variety of contexts and exercises.

Implications for Teaching

This study found evidence to support the notion to reexamine ESL curricula to integrate new technologies such as the Web as part of the curriculum so that students with different learning styles can be accommodated. It is key to note that as teachers prepare to plan Web-enhanced courses, one needs to realize that there are hundreds of ESL Web sites already available that could be used in order to provide the support for the traditional ESL courses. One important lesson acquired from this study is that the developer of the grammar Web site,

NetGrammar, did not have to create from scratch the exercises and grammar notes. At the beginning only organized Web pages with links to the different ESL grammar Web sites were developed for the students to practice the grammar points. With the help of a search engine such as Yahoo.com, hundreds of useful Web sites can be searched and found in minutes.

Another important implication for teaching that this study found was that since the support content for the traditional grammar course was on the Web, it was extremely easy and efficient to update or adjust the content of the Web site to the needs of the learners as necessary. For example, as each grammar point is developed in the classroom, during the week or on the weekend, the instructor can easily modify, add, or delete links to exercises that the learners really struggle to master.

In this study, most of the participants reported to have experienced important conditions that helped them improve their knowledge of English grammar while working on the Web-based program. The Web was an ideal new environment for optimal language learning. They were exposed to the following conditions (Egbert, Chao, and Hanson-Smith, 1999): 1) learners have opportunities to interact and negotiate meaning, 2) learners interact in the target language with an authentic audience, 3) learner are involved in authentic tasks, 4) learners are exposed to and encouraged to produce varied and creative language, 5) learners have enough time to work and feedback, 6) learners are guided to attend mindfully to the learning process, 7) learners work in an atmosphere with an ideal stress/anxiety level, and 8) learner autonomy is supported. Thus, one of the major challenges is to create interactive and communicative CALL activities for

practicing grammar. For example, problem-solving tasks should be emphasized in which each student must have a role to contribute to the whole group's goal (Egbert, Chao, and Hanson-Smith, 1999). Instructors or CALL coordinators should take advantage of the many services that the Internet offers through e-mail and threaded discussion groups in which there are several ways of interaction: teacher-student, student-student, teacher-teacher and student-computer.

One important lesson from the developer/teacher point of view is that the creation of Web-enhanced courses should not interfere with teaching and learning. Technical support staff on-site should be essential and a must. Most language institutes have the technology support personnel to assist teachers. On the budget side, the participants in this study perceived the content found on the Web to be at least as good and even better and more appropriate than that found in expensive software. As more teachers become skillful at developing Web-enhanced courses, there is no need to spend thousand of dollars in software that might do a poor job in helping different learners with different needs.

In a nutshell, given the problems the participants experienced at the very beginning when using the Internet, ESL teachers/CALL administrators are encouraged to provide students with ongoing training on using the Internet for language learning. Furthermore, ESL teachers should be encouraged to seek alternative teaching methods that incorporate Internet resources into their classes. Based on the findings and on the related literature on CALL, there is a need to understand deeply what the needs, strengths and limitations of the learners are when they are confronted to new technologies for learning and practicing language skills such as grammar, reading, writing, etc. Thus, educators--including IEP

administrators and ESL teachers--can use the information acquired from this study as they provide online resources for traditional ESL classes. The Web-enhanced courses in this study proved to be effective in providing the necessary instruction and practice for learning English grammar.

Future Research

While a significant body of literature exists with regard to the implications of incorporating new technologies in the traditional classroom, almost nothing has been written on the topics addressed below in the ESL field. Therefore, in future studies, more attention should be devoted to the following issues using both quantitative as well as qualitative methods of research.

1- What can teachers do to encourage participation by students who do not commonly interact in class with new technologies? How can technology assist in supporting such interaction?

2- How effective is group work around the computer?

3- What kinds of tasks do language students consider authentic when working on the Web?

4- What combination of media is the most effective/useful for language learning on the Web? Why?

5- What aspects of Web use are the most motivating to learners? Do these aspects contribute to second language acquisition?

6- What kind of learner is most successful at Web-based learning?

It would be very important to study how Web-based instruction in areas such as reading, writing and pronunciation contribute to the improvement of ESL learners in their quest for acquiring a second language. An interesting study could then be conducted with two groups with similar language needs. One group would have

the grammar course totally on the Web and the other in the traditionally classroom. The methodology and the content would have to be the same and the same teacher should teach both groups. Interviews could be given in both groups during different phases of the study. Finally, an exam would be given at the beginning and at the end of the study to determine which group achieved the highest level of comprehension.

Conclusions

This qualitative study has provided a detailed description and an interpretive account of how eight students coming from different countries perceived the use of Web-based support material for practicing and learning grammar. Based on the participants' data, a model for developing Web-based materials was developed and explained. This study emphasized the need to include more teacher-made materials for practicing grammar using new technologies such as the Web and e-mail. Instead of just spending a large amount of money on commercial CD-ROM programs, CALL coordinators should develop more materials that are suited to the students' needs.

Most of the participants found differences in the content of the CD-ROM programs, the Web-based program and the textbook. It was found that most of the participants followed a similar pattern in the mode of use of the Web material. They either practiced directly on the computer and/or printed out the exercises in order to work on them later on. The findings suggested that the students require ongoing Internet training, technical support, that Web-based materials use can increase students' self-esteem, motivation, and improve their attitude toward the computer and grammar learning. The study participants pinpointed advantages and

disadvantages with respect to the use of Web-based materials for learning and practicing grammar. On the whole, most of the participants had a positive attitude towards the use of the Web-enhanced grammar course to practice and learn grammar.

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APPENDIX A: INTERVIEW CONSENT FORM

A descriptive study on the use of Internet in the ESL grammar class.

Mr. Allen Quesada, student investigator
phone: 832-2490
e-mail: alleng@ukans.edu

Dr. Paul Markham, faculty advisor
phone: 864-9677
e-mail: markham@kuhub.cc.ukans.edu

The purpose of this study is to describe and explain the potential role of a Web based support program NetGrammar in the ESL grammar classrooms. The findings in this study will be published in a Dissertation and will provide ESL learners like you with an insight into the role of computer-mediated communication in the language classroom.
The student investigator in this study may wish to interview learners about their perspectives and beliefs of the Internet as a tool for practicing and learning English (grammar skills).
Your confidentiality will be maintained in this study; your names and school affiliation will not appear in any report resulting from this study. Students may withdraw from this study at any time without explanation. Please note that participants will not receive any monetary compensation for their participation in this study.
Please contact the investigators identified at the top of this page if you have any questions or concerns regarding your involvement in this study. A copy of this interview consent form is enclosed for your own records.

"I agree to participate in an interview for this study with the understanding that I may withdraw my consent at any time without explanation."

_____ _____

(name) (date)

_____ _____

(signature) (email address)

APPENDIX B: Permission for Qualitative Research

January 22, 1999

Ms. Elizabeth F. Soppelsa, Director
The Applied English Center, KU
Dear Ms. Soppelsa:

My name is Allen Quesada and I would like to carry out a qualitative research study at the AEC for my doctoral dissertation in the School of Education. My faculty advisor is Dr. Paul Markham. More specifically, I would like to do this study with a group of students in the grammar course at the third level.

The purpose of the study is to describe and explain the perspective of ESL students on using web-based support grammar materials. This study will be based on a naturalistic inquiry in which data will be collected during a semester using participant observation, and interviews. I will need to interview at least six students, three times for about thirty minutes during the course of the semester. The main research question that will guide the study is:

1. In what ways do ESL students use the Internet resources for enhancing the learning of English grammatical structures?

2. What are the perceived advantages and disadvantages of web-based support materials for learning English grammar?

3. What are the students' perspectives on the interactive exercises on the Web for practicing English grammar?

I intend to use this study for educational purposes only. Those people who participate in this study will not be identified in any manner (provided they agree) and the information provided will remain confidential. At the end of the study, all participants will receive a report of the findings.

Sincerely yours,

Allen Quesada, student investigator.
22 Stouffer PL #7,
Lawrence KS 66044

E-mail: allenq@ukans.edu

PH. 832-2490

APPENDIX C: Standards for Foreign Language Learning

COMMUNICATION

Communicate in Languages Other than English

Standard 1.1: Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions.

Standard 1.2: Students understand and interpret written and spoken language on a variety of topics.

Standard 1.3: Students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics

CULTURES

Gain Knowledge and Understanding of Other Cultures

Standard 2.1: Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied.

Standard 2.2: Students demonstrate an understanding of the relationship between the products and perspectives of the culture studied.

CONNECTIONS

Connect with Other Disciplines and Acquire Information

Standard 3.1: Students reinforce and further their knowledge of other disciplines through the foreign language.

Standard 3.2: Students acquire information and recognize the distinctive viewpoints that are only available through the foreign language and its cultures.

COMPARISON

Develop Insight into the Nature of Language and Culture

Standard 4.1: Students demonstrate understanding of the nature of language through comparisons of the language studied and their own.

Standard 4.2: Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.

COMMUNITIES

Participate in Multilingual Communities at Home and Around the World

Standard 5.1: Students use the language both within and beyond the school setting.

Standard 5.2: Students show evidence of becoming life-long learners by using the language for personal enjoyment and enrichment.

Source: National Standards in Foreign Language Learning Project: *Preparing for the 21st Century* (1996)
http://www.actfl.org/htdocs/standards/standards.htm

Appendix D: Interview Protocols

Interview Protocol I

1. Can you tell me how you became interested in using new technology such as the Internet for learning English?
2. Describe your experience with the Internet?
3. What do you like best about using e-mail and the WWW for learning English?
4. What things frustrate you the most about using the Internet?
5. Why do you like to use the Internet as a learning tool?
6. What do you get out of using e-mail and the WWW?
7. What strategies are you using to filter information on the Internet effectively?
8. How do you assess your progress in finding useful ESL sites?
9. What advantages and disadvantages can you identify in online instruction?
10. How would you compare the value of web-based support material versus textbooks?
11. What advantages and disadvantages can you identify in web-based support materials?

Interview Protocol II

1. Has the interaction with NetGrammar increased your comprehension /understanding of grammar? How?
2. Has the interactivity in NetGrammar improved your satisfaction with learning grammar?
3. What form of interaction is the most critical?
4. Has NetGrammar helped you transfer the structure knowledge to other contexts? How?
5. Does the interaction with NetGrammar have a significant effect on your achievement in the course on comprehension, retention, transfer? How?
6. Do you think that you have been doing better in the course due to the frequent use of NetGrammar?
7. Has the strategy of using NetGrammar changed throughout the semester?

Appendix E: Audit Trail

Independent Auditor's Report
Rachel Freeman, Ph.D.
March 22, 2000

Purpose of the Audit

This independent audit was conducted by Rachel Freeman, Ph.D., on the dissertation study entitled "Using the Internet to Practice and Learn Grammar: ESL Student Perspectives," to evaluate the rigor, technical accuracy, and trustworthiness of the inquiry process used in this qualitative analysis. The purpose of the audit is to evaluate the dependability and credibility of the methodological process used, grounding of the study in the data collected, and agreement of the findings with the multiple perspectives of the study participants.

Overview of Audit Procedures

The auditor met with Allen Quesada on February 9, 2000, in the Dole Human Development Center (room 2001) to discuss the purpose of the audit and expectations for both parties. The guidelines for performing the audit were derived from the checklist developed by Schwandt and Halpern (1988), Linking Auditing and Metaevaluation: Enhancing Quality in Applied Inquiry. The auditor spent the first meeting on February 16, 2000 with Allen Quesada who described the study in detail, demonstrated how NetGrammer had been designed, and showed the auditor how the data were collected and organized. Allen Quesada provided the auditor with a notebook containing the raw data, and the unitized information organized by themes and sub-themes using the program called

NUDIST Nvivo. Remaining questions needed to complete the audit occurred via phone, email, and a follow-up meeting. The auditor reviewed the following data provided by Allen Quesada:

- methodology process log
- personal journal and memos
- interviews and other raw data

Results of Audit

All files and forms were presented to the auditor systematically using the Schwandt & Halpern checklist (pp.83-85). In the auditor's opinion, it appeared that the researcher did an excellent job of organizing and storing the data and that the amount of data was more than adequate to make the assertions stated in the dissertation. The data were well organized and the methodology process log containing the unitized data clearly shows how the information is linked to the raw interviews.

Raw data were available in interview records and observational data were available in the methodology process log. All of the documents were clearly identified and easy to locate. Allen presented four audiocassettes containing the interview data collected. Data reduction and analysis processes were evident from the field notes. Field notes were available describing how member checks were conducted, what types issues arose while conducting the study, and how decisions were made regarding the analysis.

The dates indicating when materials were collected were recorded clearly and are present for everything except the evolution of the categories. By

cross-referencing, it was clear that the categories changed and emerged though the process of analysis. The data were well organized and clearly illustrated an emerging theory culminating in the case study report. In the auditor's opinion, the researcher has done an excellent job organizing and documenting the information collected in a comprehensible manner.

Through my examination of the study and the tracking of data units back to the original source, I can attest to the clear grounding of the findings in the raw data. Participants' phrases and terms recorded during the interviews were repeated in the coding on the computer and subsequently in the study report.

The auditor reviewed both the interview data and the unitized data organized by Nudist NVivo and divided into the subsequent themes and subthemes. There is a clear trail showing how the first interviews led to the next line of questions, which Allen also defined and explained during the initial meeting. A review of the field notes and the note sections indicate clarity and precision in the identification of the data units. All material from the interview was found within the data files. I found the emergent category structure to be clear and the categories seemed logical, emerging from the data rather than being prematurely imposed. Multiple perspectives were adequately documented within the themes presented. There was evidence that the category structure accounted for discrepant views in a logical manner.

After a complete examination of the audit trail I believe that Allen Quesada's has demonstrated that inquiry decisions and methodological shifts utilized in this study are dependable and credible. All eight participants were interviewed, with the exception of three of the participants who were not

interviewed in the second round of questioning. In the auditor's opinion, it appears that Allen Quesada's study contained the level of engagement with participants and number of observations necessary to sufficiently gain a sense of the setting. Trust appears to have been established with the respondents, and opportunities to correct distortions in the data were provided.

There was evidence of a systematic process for changing instrumentation based upon evaluation of the interviews, and between the two phases of data collection. It was clear that earlier interviews provided guidelines for the later interview questions. Efforts toward triangulation were evident throughout the study. A member check procedure was conducted; however, the participants agreed with the researcher's results and no changes were needed. The members verified the study report as an accurate portrayal of their perspectives.

In summary, based upon a thorough examination of the audit trail, it is my opinion that the study " Using the Internet to Practice and Learn Grammar: ESL Student Perspectives" has been conducted with a high degree of rigor, is a technically accurate document, and has demonstrated a more than acceptable level of trustworthiness in the qualitative analysis inquiry process.

Rachel Freeman, Ph.D.
The Online Academy, KU/UAP
4095 Dole Human Development Center
Lawrence, KS 66045-2342

(785) 312-5338
email: rfreeman@falcon.cc.ukans.edu

Short Biography

Dr. Rachel freeman is currently a Project Coordinator for the Positive Behavioral Support branch of the Online Academy and an Adjunct Faculty member in the Department of Special Education. Dr. Freeman is currently responsible for the writing, management, and production activities, associated with the development of online instructional materials in the area of positive behavioral support, and is teaching classes related to positive behavioral support to undergraduate and graduate students in Special Education. In addition, Dr. Freeman is currently supervising the development of a qualitative study focused on the issues related to the production of online instructional materials.

Appendix F: NetGrammar: Lesson 1

Unit Goals Grammar Notes Warm-up

Unit Goals **In this unit you will learn about:**

1. **Uses of the Verb To Be**
   "Hi, my name is Nick."
2. **Describe yourself and other people**
   "I'm a graphic designer. I have dark hair"
3. **Introduce others**
   "This is Yuko."
4. **There is/There are**
   "There's a spider under my bed."

Grammar Notes

1. The verb TO BE is so called a stative verb because it is not an action verb. I am sick.
2. The verb TO BE can work as an auxiliary of other verbs. I am going to the party. She is taking a taxi.
3. The Verb TO BE is an irregular verb: She/he/it -->is; I--> am; they/we/you--> are
4. There is/There are are used to introduce a topic you have not mentioned before or to describe places, make announcements. For example: There is a party next week. There are three people at the bus stop.
5. Wh-words are called information words. Some of them are what, who, when, how, why, how often, how much/many, etc.

Warm-up **Choose the best option.**

1.She _____an actor.

- is
- are
- am

answer

2. My father and my brother_____at he library right now.

- is
- are
- am

answer

3._____is the party? It's at Allen's.

- How
- Where
- What

answer

4. _____are you? Bob.

- Who
- Where

answer

5. _____ a cat on the tree.

- There are
- There is

answer

1. Verb to BE

Almost all verbs express some type of actions, others don't. the verb **to be** expresses conditions a states that we do not expect to change. it is also called stative verbs. These verbs express descrip relationships, emotions, etc. For example:
I *am* happy today. She *is* a doctor. Peter and Paul *are* brothers.

Statement: She/he/it/ *is* in English 101. I *am* Allen. They/we/you *are* architects.
Negative: I *am not* a programmer. We *are not* going there.
Question: *Is* she happy about her grade? *Are* you sick today?
Short answer: No, he isn't. // Yes, they are.

2. There is/There are

There in **There is** and **There are** has no meaning. Is is used to fill the subject position. There is ar There are are used to introduce a topic that you haven't mentioned before. For example: There is a in the refrigerator. Should we eat it?
They are also used to make announcements, describe things, and state facts.

Statement: *There is* someone at the door. *There are* many trees in the backyard.
Negative: *There is not* anything in here. *There are not* two rats in the box. Only one.
Question: *Is there* a message for me? *Are there* any animal doctors around here?
Short answer: No, There isn't. // Yes, there are.

3. Wh-words + To be

Wh-words such as where, what, when, who, etc. are used to ask questions about locations (where people (who), things (which), and state, quality of the action (how), justification of an action or state (why). For example:

What is your major? My major is English.
Where are you from? We're from Colombia.
How am I doing this? You're fine.
Why is she sad? Because she is not going to the party.

Summary

	present tense		past tense	
	singular	plural	singular	plural
1st person	I am	we are	I was	we were
2nd person	you are	you are	you were	you were
3rd person	he/she/it is	they are	he/she/it was	they were

Pronouns	TO BE	
He, she , it	is	happy.
I	am	going to the park.
You, they, we	are	at school.
Yes/No **Questions:**	**Pronoun**	
Is	he	a doctor?
Wh-questions	**TO BE**	**Pronoun**
Where	are	they?

Listen to Emily's self introduction by pressing the "Play Audio" button, and answer the questions as you listen. To check your quiz, press the "Score" button.

Play Audio

---

1. What does Emily do?

- A. She's a fourth year college student.
- B. She's a third year college student.
- C. She is a first year college student.

2. What is Emily majoring in?

- A. Web development
- B. Medicine
- C. Business

3. When is Emily's brother graduating?

- A. This Fall.
- B. This Spring.
- C. This summer.

4. How many roommates does Emily have?

- A. She's got thirty roommates.
- B. She's got three roommates.
- C. She's got two roommates.

5. Do Emily's roommates love animals?

- A. Yes , they do.
- B. Yes, but just cats.
- C. Absolutely not!

Score

Reset

Percentage =

Correct answers:

Transcript of the Listening Exercise

Hi. My name is Emily. I 'm a fourth year business major at the University of Kansas emphasizing in Information Systems. I would be graduating this Fall along with my brother, who is getting his M.D. from the KU School of Medicine... Ahh.. shortly there after I plan on getting to southern California to start my career.

Ahhh..Currently I live with three roommates. Two of them are sisters and they share the master bedroom. My other roommate and I have our own rooms.

Ahh seems like I ma the only green thumb of the house. I have three African violets, a magistic palm plant, an Ivy plant and a bamboo plant. We have no pets because my roommates are unfornately anti-pet.

One of my major interests is Web development. And my Web page is one of my ongoing projects. If you would like to visit, the address is http://fly.to/emly

Pre-Reading Activities

A: Interview

How does the weather affect you? Ask your partner the following questions.

How do you feel when...

1. ...it is sunny and very hot?
2. ...it is sunny and warm?
3. ...it is cloudy and hot?
4. ...it is cloudy and cold?
5. ...it has just begun to rain?
6. ...it has been raining for a long time?
7. ...it has just begun to snow?
8. ...there has been snow on the ground for a long time?

What is your favorite kind of weather? Why?

What is your favorite season? Why?

B: Vocabulary

Today's article has some words about the weather. Match the words in bold from the article with their meanings.

Words

1. [ ] The **balmy** weather in early summer is very nice for going to the beach.
2. [ ] The clouds caused it to be a very **gloomy** day.
3. [ ] We had to drive slowly because the **fog** made it difficult to see.
4. [ ] When the weather is **chilly**, I prefer to sleep-in rather than get up.
5. [ ] The **blustery** conditions made it very difficult to serve the ball during the tennis match.

Suggested Answers

Meanings

A. A low thick cloud
B. Cold weather
C. Little sunlight, dark
D. Mild and warm weather
E. Windy weather

C: Predicting

Look at the headline of today's article: **"Cool Summer Has Southern Californians Feeling Gloomy"**. We learnt one definition of **gloomy** in the vocabulary activity above, but there is another definition. With a partner discuss what you think gloomy in the headline might mean.

Suggested Answer

Reading Activities

A: Comprehension

Read the questions below then find the answers in the article.

1. Why are people from Los Angeles (LA) complaining about the weather?

   Suggested Answer

2. What is the reason for this unusual weather?

   Suggested Answer

3. How do people in LA feel?

   Suggested Answers

4. What have the average temperatures been?

   Suggested Answers

5. What is the temperature normally in June?

   Suggested Answers

6. What usually keeps the June mornings cold along the coast?

   Suggested Answers

7. How long do weather experts predict the La Nina phenomenon to last?

   Suggested Answers

8. Who is not unhappy about the cold weather?

Suggested Answers

9. Why is the air temperature over the sea-water cold?

Suggested Answers

10. Where does the television show "Baywatch" do its filming now?

Suggested Answers

Cool Summer Has Southern Californians Feeling Gloomy

By Dan Whitcomb

LOS ANGELES Friday June 4 (Reuters) - It's a bummer, dude.

This city of sun-worshippers, beach goddesses, surfers and sun-seeking tourists is doing something it seldom does -- complaining about the weather.

Normally balmy Los Angeles is enduring a **spell** of unusually cool and cloudy weather, courtesy of a weather phenomenon called La Nina -- and predictions are that it could last all summer. It is the talk of the town.

"Weird weather has suddenly become the norm," local KNBC weatherman Fritz Coleman told tense TV listeners recently.

The natives are restless, feeling more gloomy than groovy, and they all seemed to have **donned** sweaters and coats to battle a "June Gloom" they fear will never lift.

The cloudy weather has been the second or third item on the evening TV news for days and the **staple** of radio talk shows, pushing such issues as Kosovo off the map for Angelenos.

Temperatures have averaged 50 to 70 degrees Fahrenheit (10 and 21 degrees Celsius), five to 10 degrees Fahrenheit (two to five degrees Celsius) cooler than normal.

"It's a big topic down here," said John Moryl, a lifeguard at Santa Monica's beach. "All the patrons complain about it. It's not every June that it rains all night," he said referring to a winter-like storm earlier in the week.

Southern Californians are familiar with "June

"Today looks like February down here," Moryl said, looking out over the Pacific Ocean. "It's very blustery and there's a cold wind out of the west. Its more like January or February and it's June 3rd already."

Lifeguards, who are using heaters in their wooden towers, have had complaints from unhappy beach-goers, said Moryl.

"Oh, yeah, they casually remark to the lifeguards that it's not very summer-like down here," he said.

The only people who don't mind the gloomy weather are surfers who hope the storms will kick up a few good waves and keep the beach bums at bay and out of their way.

"Dude, its been totally gloomy, and the water's totally cold. But everybody I know could care less if it was super cloudy all year, as long as the waves are good," said surfer Jason Regehr, 25.

Dave Danielson, a spokesman for the National Weather Service, said the "Summer of Gloom" can be blamed on La Nina, which cools the water temperature off California's coast. That, in turn, cools the air temperature over the water, creating an "inversion layer" beneath the warm air of the upper atmosphere. As a result the clouds and fog on the coast are trapped.

"Basically in a La Nina year it's not unusual to have colder-than-normal temperatures along the coast," he said. "And you'll also see a stronger than normal sea-breeze, which tends to bring clouds in and make them persist a little longer."

Gloom" -- the low clouds and morning fog that can keep the coast chilly, especially in the morning. As any dedicated surfer knows, the fog usually lifts and weather gets warm by afternoon. And the fog disappears by July.

But some weather experts are predicting that this year La Nina -- a sister to the El Nino phenomenon which **unleashed** unusually rainy weather on Southern California last year -- will **blot out** the sun for much of the next three months.

Danielson said his office has not predicted a summer-long trend. "You can't say something is going to happen for the next three months."

Meanwhile, that famous TV program celebrating Los Angeles sun and surf, "Baywatch," has moved out of town -- to Hawaii, where the skies are blue and sunny all day. It must have known that "June Gloom" was headed this way.

B: Finding the Main Idea

Newspaper articles usually have a paragraph near the beginning of the article that gives the main idea of the story. Read the **first five paragraphs** carefully and choose the paragraph you feel gives the main idea. Then discuss your answer with a partner.

Suggested answer

C: Vocabulary

Guessing Unfamiliar Words: Find the words in bold in the article and, **without** using a dictionary, write '**T**' if the definition is true according to the article or '**F**' if it is false.

1. ____ A **spell** is a period of time.
2. ____ If you **don** a sweater, you knit a sweater yourself.
3. ____ **Staple** in this sentence means the main topic of conversation.
4. ____ To **unleash** something means to keep it under control.
5. ____ If something is **blotted out**, it means it is forgotten by everyone.

Suggested answer

D: Language

Cause and Effect Signals: Different words are used to describe the cause or effect of a process. Read the sentences which describe the La Nina process. Write down any words that signal cause or effect.

1. _____ The cold sea-water is due to the La Nina phenomenon.

2. _____ The cold sea-water causes the air temperature over the water to cool.

3. [ ] The cool air leads to an inversion layer effect beneath the warm air of the upper atmosphere.

4. [ ] As a result, the clouds and fog on the coast are trapped.

5. [ ] La Nina has brought about a lot of unhappiness to Southern California.

Suggested answer

1. **Write about the weather.**

   What is your favorite kind of weather? Why?
   What is your favorite season? Why?

   click to: Respond

2. **Write about the differences and similarities between the weather in the U.S and in your country.**

   click to: Respond

1. _____you from? I am from Brazil.

- A. Where are
- B. Where is.

2. Mary and Sam_____at the same school.

- A. is.
- B. are.
- C. am

3. _____butter in the fridge?.

- A. Are there.
- B. Is there

4. _____you thirsty?

- A. Are
- B. Do
- C. Is

5. How old are you?

- A. Thirty dollars.
- B. Twenty-five.
- C. Yes, I am.

6. Is Sonia a good nurse?

- A. Yes, she does.
- B. Yes, she is not.
- C. Yes, she is.

7. Are you and your sister identical twins?.

- A. Yes, you are.
- B. Yes, we are.
- C. Yes, she is.

8. What is you dad?

- A. He is a mechanic.
- B. He is happy.

9. Is there anything you do not like about it?

- A. Yes, I am.
- B. Yes, it is.
- C. Yes, there is.

10. Who is that woman?

- A. That is Mary.
- B. Yes, she is Mary.

Your Name: (optional)

See Results

Appendix G: Beta Testing Results of NetGrammar

Questions	Percentage Responses			
	Teachers		Students	
	Agree	Disagree	Agree	Disagree
1. The web site is easy to use	96	4	88	13
2. The Tour Guide is very useful	74	26	81	19
3. Introduction level helps to better understand NetGrammar	96	4	91	9
4. Support Level is a good complement for all units	91	9	72	28
5. The format of exercises is good	87	13	91	9
6. The feedback of exercises is good	91	9	78	22
7. The purpose of NetGrammar is clear	96	4	78	22
8. Task Level exercises are useful	87	13	78	22
9. Weblinks support NetGrammar	100	0	78	22
10. Skills are integrated	78	22	84	16
11. Navigation is easy	96	4	72	28
12. Grammar sequence is good	91	9	81	19
13. I would tell a friend/colleague	91	9	84	16
14. Units are a good supplement outside the classroom	91	9	88	13
15. NetGrammar is effective in presenting grammar points	78	22	88	13

Appendix H: NetGrammar

Task Level: WebLinks

Overall Units Practice

- Dave Sperling's ESL Cafe
  Lots of great things of interest to ESL students and teachers

- The English Language Center Study Zone
  This page is an index to a range of materials created for students of the University of Victoria English Language Centre regular and online programs. It includes grammar presentations, interactive practice exercises, and help pages for basic writing skills. .

- Guide to Grammar and Writing
  Prepared by Professor of English/Humanities Charles Darling for English courses at Capital Community-Technical College and for the general online public.

- Self-Study Quizzes for ESL Students
  Over 900 quizzes dealing with New Quizzes | Reading | Writing | General Knowledge | Holidays | Trivia Grammar | Homonyms | Learn About Places | Idioms, Phrasal Verbs & Slang | Scrambled Words | Vocabulary, etc.

- English lessons and Tests
  Learners of English will find all types of interactive tests and exercises here: grammar, vocabulary, reading,crosswords, hangman and more.

- WebGrammar's Place
  This site evolved in an effort to help people with simple grammar tools for everyday American English. It went from grammar and style to other categories in order to support the interests of Webmasters, educators, students, and others. But primarily it's about language.

- The English Zone
  This is a fun site for students who are learning English as a Second Language, or studying English in general. Learn some idioms, practice English verbs, test your grammar, check out the fun stuff page, write a silly story, or visit links to other English sites! by Kaye

- ESL Resources for Students
  This is part of OWL (On-line Writing Lab), a project of the Purdue University. Great examples and explanations by Purdue OWL Handouts

- Grammar Dimension Online
  It is based on the series Grammar Dimensions textbooks. The Grammar Dimensions Online web site has been created and is being maintained by a team of English as a Second Language professionals.

- Randall's ESL lab
  Great listening exercises for all levels!!

- Grammar Goblins
  Great grammar exercises developed by Dr. Sheryl Beller-Kenner

- Quiz on the Future Perfect
  Practice on the future perfect

- Grammar Bytes
  Examples and explanations about Grammar, Interactive Exercises, Handouts for Students and Teachers, Grammar Rules and more!!

- Business English Exercises
  Exercises about various parts of speech and grammatical structures and much more.

- Grammar Zafari
  The "grammar safari" activities suggested here are just that, suggestions for "hunting" and "collecting" EXAMPLES of specific words as they are used in documents accessible to anyone on the WWW -- a vast, ever-growing, always up-to-date "corpus" of language ranging over an inexhaustible range of topics, geographic areas, and users.

- The Grammar Handbook
  The Grammar Handbook, at the Writers' Workshop-University of Illinois at Urbana-Champaign- explains and illustrates the basic grammatical rules concerning parts of speech, phrases, clauses, sentences and sentence elements, and common problems of usage.

- Quiz on For or Since
  Click on the right option

- For or Since
  Choose the correct option

- Three Quizzes on Tenses
  Great quizzes